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ComputerWeekly

Thursday, April 1, 1982

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Price drop predicted for 3033s

by Boris Sedacca

UK leasing companies are bracing themselves for a drop in the residual values of IBM 3033 machines in readiness for additions to the 3081 family.

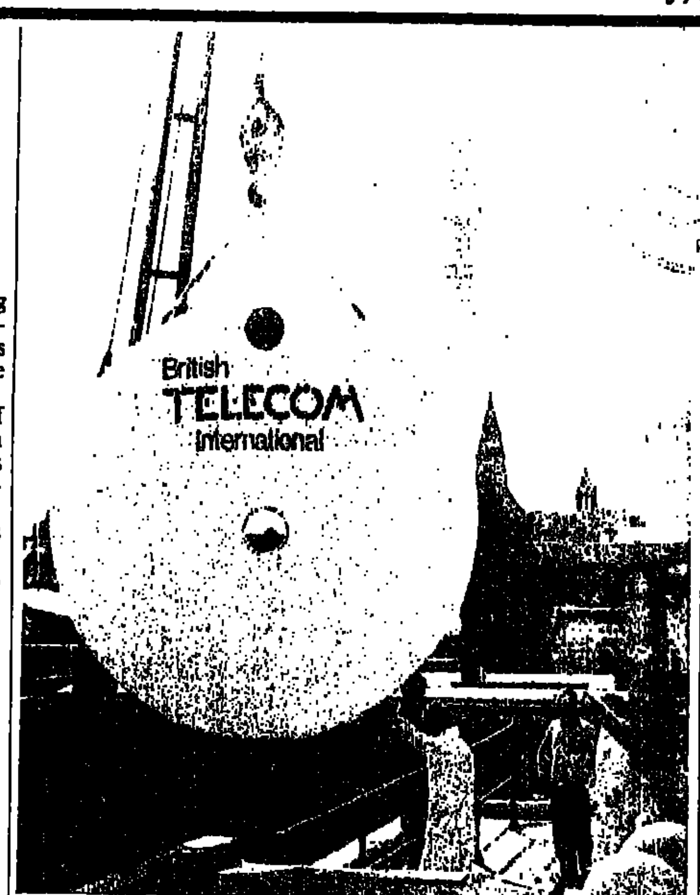
Speculation about the demise of the 3033 has forced prices down over several months, but there has been no significant price shift recently, despite widespread expectations of replacement machines from the 3081 series. IBM last week backed off from making its next announcements. These are expected to be a five million instructions per second (mips) processor and a seven mips machine. A decision on the launch is still imminent.

According to Vernon Etherington, managing director of Combro Computer Brokers, an eight-megabyte 3033U with 12 channels currently fetching a market price of £550,000 will only sell for around £450,000 by the end of the year.

But this is a symptom of normal supply and demand factors rather than speculation on 3081 announcements, he adds.

Logan White, managing director of Megaleasing, predicts that the entire 3033 range of three machines, the S, N and U, will be obsoleted by the end of the current IBM quarterly announcement cycle. They will be replaced by 3081 machines with corresponding power ratings of 3.5, five and seven million instructions per second.

"It would make sense for IBM to price the bottom-end machine cheaply, let's say about £500,000, to get customers into the 3081 range and watercooling."



A satellite station antenna is lifted on to the roof of University College, London as part of the preparation for Project Universe.

Satellite link-up by July

by Donald Kennett

FINAL links in the SERC's £3 million experiment to interconnect high-speed local networks by satellite will be made in July.

University College London was the first participant in Project Universe to take delivery of its ground station receiver last week. A second followed close behind, to Cambridge Computer Laboratory, and the remaining four participants in the experiment should get theirs by July.

Computers, terminals, facsimile transceivers and other digital devices will be interlinked at each site by Cambridge Ring local area networks, and the satellite links will provide a 2Mbit/sec link between sites.

This will allow the participants to resolve some of the problems of implementing high-speed internetwork links in preparation for the public availability of such links, for example via British Telecom's SatStream digital business communications services.

BA first customer for top-end NAS system

by Boris Sedacca

NATIONAL Advanced Systems is set to respond to IBM's forthcoming big machine announcements with a new one of its own, of which two have already been ordered by British Airways.

The order signals the final rift between IBM and British Airways, now a major Amdahl user and one of the largest computer installations in the UK. IBM must have viewed the site for a long time as a prospect for luring back into the fold.

The new NAS machine, provisionally codenamed AS9100, offers 25% to 30% more power than the existing AS9000, rated at eight million instructions per second for a uniprocessor configuration. It can be field upgraded from the present machine.

It is based on the new Hitachi M280H, but the Japanese version is not upgradeable from the existing M200H on which the AS9000 is based. The modular construction of NAS machines allows the same memory, I/O processor and console to be used with the more powerful central processor. The power boost comes from the use of additional circuit boards and some architectural enhancements.

IBM's expected announcement is believed to be for bottom-end extensions to the 3081 range processors. Estimates vary but new machines will cover a power range of five to seven million instructions per second.

JACOBS . . . Took his Amdahl expertise from BA to Sainsbury's.

British Airways is currently running two Amdahl V6s and V8s, but late last year brought in a third supplier, NAS, when it ordered an AS9000. Meanwhile Alan Jacobs, head of computer services at British Airways and one with a great deal of Amdahl experience, has left to join Sainsbury's.

Neither British Airways nor NAS would comment on the deal, but it is estimated to be in excess of £4 million.

The order is a blow not only to Amdahl, for which British Airways is the largest customer outside the US, but also to the aspirations of two European newcomers into the plug-compatible processor market. These are Olivetti of Italy and BASF of Germany, both of which also market the Hitachi range.

IBM UK passes the billion mark

by Kevin Cahill

BRITAIN'S biggest computer company, IBM (UK), has passed the £1 billion sales mark for the first time.

Despite this generally creditable performance the company's turnover has slipped in inflation adjusted terms by about 7%. Turnover rose from £954 million in 1980, to £1,002 million for 1981, a rise of 5%, in the face of 12% inflation.

New investment by the company fell from £132 million in 1980, to £118 million in 1981, a drop of 22% in inflation-adjusted terms. Partly because of this, IBM UK's after tax profits fell and its tax bill rose.

Pre-tax profits were £161 million, a 5% rise on 1980's £153 million, but tax paid rose from £62 million to £79 million. The final profit figure, therefore is a fall of 10%, or 22% in inflation adjusted terms.

The company also lost ground in exports to the tune of £32 million from £452 million in 1980, to £420 million last year.

The slippage may actually have made the company a net importer of equipment from the parent company this year. Last year it was an £8 million exporter.

In the UK itself the company made real ground, even allowing for inflation. Sales rose £80 million to £582 million, a 16% rise which leaves IBM UK 4% ahead of inflation.

Against this, the parent company in the US was just 3% ahead of US inflation.

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Systime record sales

by David Craver

LAST month's returns show record sales for Systime, the Leeds minicomputer company, and there will be some additional senior management appointments this month to help oversee the company's rapid growth, says chairman John Parkinson.

"There are a number of first-class people being hired to strengthen our team," Parkinson said, and he promised that at least one of them should cause a bit of a stir in the industry. Systime has recently lost some of its marketing staff, but Parkinson says that is not surprising at the rate the company is growing.

The centrepiece of Systime's current expansion programme is a £23 million second factory in Leeds. Funding is coming from a European Investment Bank £10.6 million, five-year loan and a selection of DoI grants.

Parkinson says terms for the factory represent "one of the best financial packages in the industry", and will entail no net cash outflow until next year.

Systime recently announced turnover of £32.1 million and pre-tax profits of £2.2 million, up 40% on the previous year. It has built its success around Digital Equipment Corp processors, but its latest strategy has been to develop as a manufacturing company in its own right.

It involves the Series 500 microcomputer based on the Intel 8086 chip which was released last year, and which is the basis for future office automation products.

The National Enterprise Board, now British Technology Group, holds 29.5% of Systime.

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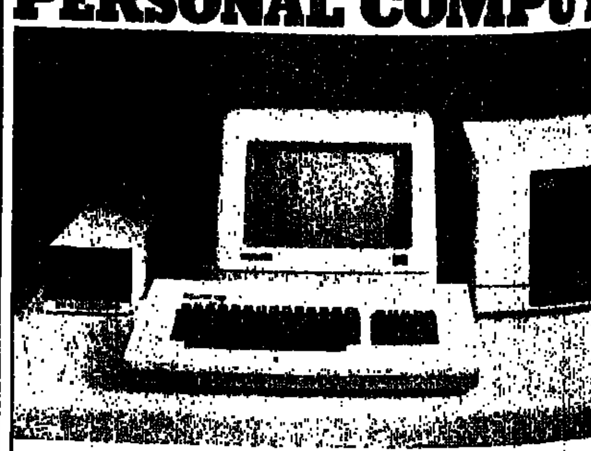
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Distributed processing blow to ICL

Camelot scrapped by DHSS

by David Craver

THE Camelot project to automate DHSS supplementary and incapacity benefits with 26 ICL mainframes spread across the country, is dead. A consultant's report recommending that the plan be scrapped is sitting on the desk of Minister Norman Fowler, and it is understood that all contracts with ICL are cancelled.

A new scheme, the Local Office Automatic Data Processing Project, or LOP, is awaiting approval and is almost certain to go to open tender for the machines involved.

The loss of Camelot business will come as a heavy blow to ICL, but there is bound to be strong political pressure to ensure ICL has a hand in LOP.

The Department of Health and Social Security's Camelot project was to spread ICL 2950s over its 12 regions, with each local welfare office equipped with a dumb terminal linked to a central database.

But it ran into trouble last summer, with both ICL hardware and the systems software coming in for extensive criticism. Consultancy firm Leasco was called in by the DHSS to make a detailed examination of the project, and found serious problems with the online programs and subsequent response times.

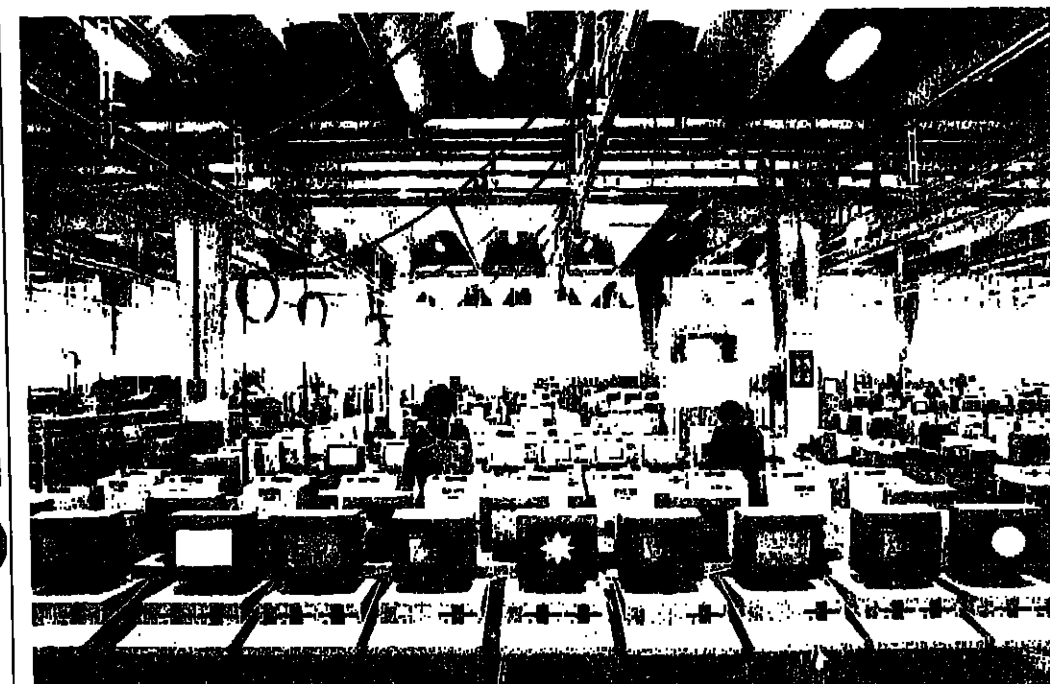
A pilot project was awarded to ICL nearly three years ago, with software development of Computer Aided Mechanisation of Local Offices (Camelot) being done on twin 2950s in Reading. All development work has now stopped.

The contract for LOP is planned to be placed by 1984, with equipment delivered in 1985 and live installation by 1986. A full study on how to proceed with computerisation is to be done between now and September, if Fowler gives approval, with technical requirements out by the end of 1982.

LOP will be based on what is called the "whole person concept", by which a single claim made at a single location will provide all benefits to which an individual is entitled. As such it will be an expansion of the Camelot scheme, although it will be more generalised and less benefit explicit.

LOP will involve eight to 12 computer centres linked by VDUs to local benefit offices, with an expected response time of five seconds. The terminals are likely to be intelligent, micro-based units with lots of concentrators.

● Turn to back page


Olivetti plans a major thrust into the personal computer market with the 16-bit M20 shown here undergoing tests at its Scarmagno plant in Italy. Full story, page 2.

Failure to train will cause DP salary boom, survey finds

by Andrew Thomas

STAFF shortages in the average mainframe installation last year left significant gaps in the main job categories. A national survey published exclusively in Computer Weekly this week reveals that the average site had 6% fewer systems analysts than it needed, 8% fewer programmers and 11% fewer analyst/programmers, and that the shortages are getting worse.

Over the next five years demand for these staff will grow by up to 22%, yet less than a third of the installations surveyed carried out any training for new entrants to the industry.

The result is likely to be increased pressure for salary rises coupled with an increased use of contract staff.

The survey was carried out in the last quarter of 1981 by the National Computing Centre and tackled three major areas: staff numbers, salaries, and holidays and perks. It covered over 400 installations having systems worth more than £250,000.

The survey also shows that the average pay rise received by DP employees last year was below 10%, and that perks are playing an ever-increasing part in staff remuneration packages.

DP staff salaries rose on average by 9.5% in 1981, but are predicted by managers to increase by 7.5% this year. Chief analyst/programmers topped the table of 1981 increases with an 11% rise, and are expected to receive the highest increment this year, estimated at 9.2%.

Bottom of the list for rises last year were data preparation staff with 8.4%. In 1982, senior programmers look to be in line for the smallest increase with 6.8%.

Highest paid DP employees in 1981 were the heads of management services, who grossed an average £14,730, though those working in the top-paying 20% of installations got more than £17,000.

Data control clerks and tape librarians were the lowest paid, averaging only £4,575. Those in the worst-paying 20% of installations received less than £3,900.

● Full survey on pages 14-15.

NEWS BRIEF

£200m loan guarantee extended

ICL is to get a three-year extension of its £200 million government loan guarantee, which runs out next March, but must pay for the privilege. The charge will depend on the level of borrowing, but is unlikely to be a significant item on the company's balance sheet, the company says.

The £200 million guaranteed will decrease by £50 million a year from 1983, to run out in March 1986.

Law course

FIRST university course on information technology and the law is to be offered by Southampton University's Faculty of Law. Third year students will be able to take an optional course covering topics such as the impact of computer technology on the rights of the individual and proposals for international data protection laws.

£1½m for IT82

AN injection of £750,000 from industry brings total funds for Information Technology Year to £1½ million. Offers of help have come from the City and many sectors of industry including British Leyland, British Petroleum and Ford, to support the programme for 1982, which includes over 300 regional events.

Tariff cut

JAPAN has dropped its import tariff on computers to 7% – a cut of 2.1%. But the move will not affect ICL, Britain's only mainframe manufacturer, since it does not market computers in Japan at present. The reduction is part of a general round of tariff cuts following recent Gatt negotiations.

3083 signals end of plumbing

by Kevan Pearson

IBM has abandoned a decade of external water cooling for its largest mainframes by introducing machines which can be air cooled. The machines are in the 3083 family of the H-series and have power ratings between the older 3033 and the new 3081 models at the top of the series.

The machines announced worldwide last week were models E, B and J of the 3083 family, and are uniprocessor versions of the larger dyadic (tightly coupled dual processor) 3081 range. Their power ratings range from four to eight million instructions per second.

They retain closed circuit water cooling for their central processors, like all large IBM mainframes, but this can in turn be cooled by cold air as an alternative to the usual IBM chilled water unit.

The upgrade path from the 3083 to the 3081K, the largest mainframe IBM offers, still means a return to plumbing and external water cooling, however.

One of the other upgrade options IBM is known to be pursuing, says Brian Burch, director of National Advanced Systems, is a multi-processor version of the 3083J, linking two of these machines as in the current 3033MP.

This, says Burch, will allow users to upgrade to a 3081K level of performance of about 14 mips without reverting to external water cooling.

IBM will drop water cooling on H-series

Flashback to Computer Weekly of October 1, 1981.

Nevertheless, the signal that IBM is moving away from water cooling is significant for users faced with the option of buying from plug-compatible rivals, all of which use air cooling throughout.

The three 3083 announcements also make clear that the original H-series launch, of a machine which is now known as the model D, was very much a stop-gap in the face of tough plug-compatible pressure from the Japanese. The 3083 upgrades directly to the 3081K, missing out D altogether.

But IBM users of 303X and older 370 series machines, which can wait until 3083 deliveries start later in the year, gain a significant benefit in not having to make the leap to the much larger 3081, which starts at 10 million instructions per second.

● Impact on existing IBM machine page 2.
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Latest IBM top machines spell end for 3033s

by Kevan Pearson

PRICING and delivery on IBM's latest additions to its 308X top-end mainframes will effectively make obsolete its 3033 family within two years.

The three new machines, the 3083 models E, B and J are in the four to eight million instructions per second performance range, and were launched last week with the option of external air cooling for their internal liquid cooling system.

Prices range from £826,000 for the 3083E to about £2.1 million for the top performance version of the model J.

While this puts the 3083 on the same price/performance curve as the 3081D, a 3083J gives fewer mips per £ than a 3081K, indicating that the machine is relatively overpriced at the moment.

"There is a lot of fat in the price of the 3083J which could come out before IBM is ready to make delivery," says Brian Burch, director of large systems marketing at National Advanced Systems.

IBM expects to start delivering the low-end 3083E in late 1983. This model can have eight or 16 Mbytes of memory and eight or 16 channels. It is also ultimately upgradeable to the 3081K.

Smaller versions of the 3083 Models B and J are also upgradeable. These processors are fully rated at six and eight mips respectively and can have up to 24 input/output channels and 32 Mbytes of main store – the same as the 3081 series processors. Smaller versions, say with 16 channels and 16 Mbytes of memory, will not be available until 1984.

Initial deliveries of larger 3083s should start in the final quarter of this year.

According to Burch, IBM is attempting to prevent a lot of low-end 3033s from coming on the market at low prices, under the £600,000 price tag which the independent leasing companies put on a 3033 at the moment. Although IBM is no longer building 3033s it is estimated that up to 40% of the 2,500 machines made since the launch in 1977 are leased from IBM.

What to expect

- 3083E – approximately four mips (million instructions a second).
- 3083B – approximately six mips.
- 3083J – between 7.5 and eight mips.
- 3087 H – water/air intercooling for CPU.
- Prices ranging from £826,000 for the smallest model to £2.1 million for largest.
- Early deliveries available on large memory 3083 models B and J (late 1982/early 1983), long delivery on 3083E and small memory versions of models B and J (late 1983/early 1984).
- All new machines support MVS/XA.
- 3083E upgradeable to models B and J; 3083J upgradeable to 3081K.

JARVIS . . . Reservation system for small travel agents.

Multi-airline booking service

by Philip Hunter

ACCESS to the central booking systems of most major airlines is now possible through a single operating system for many small travel agents.

This follows five years of co-operation between the airlines and Ascot-based Travicom, which has offered a system to all travel agents approved by ABTA, the Association of British Travel Agents, for an annual fee of £1,700.

Until now Travicom has produced systems just for business bookings and large travel agents approved by IATA, the International Air Transport Association. Other travel agents have had to cope with the different operating systems and protocols of the various airlines, which are constantly changing anyway. Now that is Travicom's headache.

The booking system is not designed for end users, but for operators skilled in the existing airline jargon. "We decided not to offer user friendly commands because most agents have trained staff to use the terminal," explains Travicom managing director Eric Jarvis.

There is a demand for an in-house booking system with simple commands for some larger companies, but Jarvis adds that the politics involved prevent this from being offered at the moment. "The big travel agents do not wish to lose their business," he says. At the same time, the big airlines want to keep their business with approved operators.

The system is based on the Apollo desk-top computer and has word processing and mail list packages as well as the Tabs accounting service as options.

Prestel is also available, and access to the private viewdata systems of Thomson Holidays, Thomas Cook and others can be negotiated.

SALES BRIEF

Another £55m digital PABX orders

BRITISH TELECOM has ordered a further £55 million worth of digital PABXs to support to customers. They include a second batch of orders to Mitel for its 24-line 134-extension PABX which BT markets as the Regent. The first batch last year was for £10 million and this one is for £45 million.

Plessey and GEC have each received £20 million worth of orders for the Monarch PABX which was originally designed by BT. Orders placed for Monarch, which handles up to 30 exchange lines and 120 extensions, now total £65 million since its launch in late 1980.

Co-op is first

CO-OPERATIVE Insurance Society is the first European user for IBM 3350 compatible disc drives from National Advanced Systems. The NAS 7360 disc storage subsystem will be installed at the Co-op's data processing centre in Manchester.

ICL ousted

CODEX UK has won a contract to supply Manchester Polytechnic with data communications equipment worth about £80,000 for a new computer system based on a Prime 860 supermini which will serve up to 72 terminals at four sites in Manchester. The system replaces an ageing ICL mainframe which has been used since 1972.

More Momentum

UK SYSTEMS house Combined Technology Ltd has won its third order for a Momentum computer from the Metropolitan Police, to bring total sales of the system to over £630,000 since its launch last December. The order includes an 8046 system, and enhancements to an existing CTL 8040 to bring it up to an 8046.

Oil package

NORTHERN Software Consultants has won an order worth £50,000 for its NOR-SAL2 real time sales ledger package, from Total Oil Great Britain.

Database deal

CACI has won a contract to develop a Codasyl database system on behalf of the Petroleum Engineering Division of the Department of Energy. This will monitor exploration and development of hydrocarbons within the UK and on the Continental shelf, and also monitor the performance of licensed operators as well as enforcing health and safety aspects.

WILMOT . . . ICL "well placed to capture multi-screen micro market."

ICL extends support to dealers, retailers

by Claire Gooding

ICL showed its hand in the marketing stakes last week, promising customer support beyond that of any other major manufacturer.

Managing director Robb Wilmot revealed plans to support dealers and retailers as well as users. The Trader Point scheme, devised last year to make the selling of ICL kit more attractive to independent distributors, was just the beginning of the new mood for co-operation. ICL's support will now extend to maintenance and workshop services after the sale.

On show to the traders gathered to hear Wilmot's message of goodwill was the other mainspring of ICL's marketing plans – the entire range of low-end business machines.

Wilmot emphasised that one of ICL's advantages was that it could now offer a comprehensive range of machines, including the 8800 word processing kit, inherited from Nexos, and the new ICL Personal Computer, based on Rair's black box.

"This is the culmination of six months' effort," said Wilmot. "ICL is going to be big in small systems, but will remain small enough to listen and care about its customers. It has all taken longer than I'd hoped but the end product is right.

"ICL is going to be the Number One company which can do everything in the information field effectively."

Although its integrated range of small business machines is its main weapon, particularly the System 25 and the DRS distributed system, ICL is providing plenty of back-up. Wilmot said that the company would be spending £500,000 on extensive advertising in the national and trade papers, and doing everything else it could to support traders.

Trader Point, the sales boosting scheme, operates on a points system for dealers, offering discounts if they sell more than one specific system. Wilmot pointed out that it is now in their interests to market the entire range because of ICL's "solutions rather than systems" approach.

There are three categories of trading: distributor, offering third party discounts; commission, covering recommendation and installation; and collaborative, for OEM and joint development schemes.

Software houses are also getting part of ICL's "brand new deal" and there is already a catalogue of products such as the Tabs accounting systems available on the new Personal Computer.

In adopting independent offerings, ICL is following IBM's example in more than the naming of its microcomputer.

"As IBM has declined to make its product available in the UK we are well placed to capture the multi-screen sector of the micro market," said Wilmot.

As a back-up to Trader Point there will be central maintenance centres, telephone diagnosis of problems, an extensive workshop, a mobile maintenance team and 2,000 front line staff. ICL has also invested £14 million in spares for the maintenance scheme.

Power is doubled on System 38

by Boris Sedacca

THE flurry of excitement created by IBM's big machine announcement has overshadowed the smaller System 38 business computer which is beginning to extend its reach into the lower end of IBM's mainframe range.

IBM has announced the System 38 Model 7 which offers twice the power and storage of the current Model 5, and a Model 9 is expected to follow in one year's time with a performance approximating that of a 370/158 mainframe. Model 7 has roughly the same performance as a 4341 Model Group 2.

According to Mike Newman, managing director of Interactive Database Systems, a systems house specialising on the System 38, IBM will also launch a colour screen for the machine in May.

Such screens are already used on IBM mainframes including the 4300 series which System 38 appears to be challenging, but Newman believes they will offer better editing facilities and more functions in microcode than the terminals used on the 4300s.

Olivetti bids for personal market

by Robert Parry

GIANT Italian company Olivetti has plans to carve itself a large slice of the personal computer market. Its entry is a 16-bit machine which it believes can capture a tenth of European sales next year.

The machine's first public airing will be at the Hanover Fair in a fortnight, but it will not be available in the UK until late May or early June, says British Olivetti's division manager for microcomputers, Les Marshall. This is to allow a good quantity of application software aimed at UK users to be available with the machine.

"The people who will win are those with quality software," says Marshall, "and we can afford to wait for that quality software." Packages to be offered with the machine will attack vertical markets like solicitors, estate agents and accounting, as well as serving general needs.

Olivetti's own operating system PCOS (professional computer operating system) is used, but CP/M compatibility should be available in the autumn, adding greatly to the range of application software. Packages from Olivetti's minicomputer range have been configured to run under PCOS on the personal computer and there are programs for financial planning, word and data processing, and file management among those ready.

Hardware will retail at £2,395, not including a printer, and should hit British Olivetti's existing sales outlets in the second week of May. British Olivetti will not be selling the machine directly to users.

The machine is based on the Z8001 microprocessor which is second sourced by Italian chip manufacturer SGS-Ates.

It comes with a minimum of 128 Kbytes of RAM and twin integral floppies, but a 10 Mbyte hard disc version is promised soon. The keyboard is completely "soft" – key functions can be reprogrammed by the user – and there is a high resolution monochrome or colour display, though the colour unit will not be on sale in the UK until later in the year.

Olivetti's target for its personal computer, according to Olivetti chief executive, Carlo de Benedetti, is to gain a 10% market share in Europe in 1983.

IBM sales deal extended to the UK

by Boris Sedacca

A JOINT marketing deal between IBM and array processor manufacturer Floating Point Systems has been extended to the UK.

The arrangement allows salesmen from both companies to propose joint meetings with UK users, although it is understood that a joint sale by IBM and FPS worth $400,000 to FPS has also been concluded this week with a customer in Norway. The order is for FPS 164 array processors.

The arrangement does not preclude either company from entering into similar arrangements with other companies.

NEC to make 64K chips in Scotland

by Robert Parry

LEADING Japanese semiconductor manufacturer Nippon Electric has revealed that its soon-to-be-opened Scottish factory will produce 64K dynamic RAM memory chips. The plant in Livingston will at first assemble and test devices shipped from Japan, but complete production is scheduled within two years.

The factory, in which NEC has invested £40 million, is planned to start operations this autumn and to be in full production by 1985. The 64K dRAM will be the first device to be manufactured there and, when full production levels are reached, will make up about half the plant's output, at 300,000 devices a month.

NEC's move is just one of many making the game of 64K memory chip manufacture look like musical chairs. Japanese companies, which dominate the market with a 70% share of 64K dRAM shipments, are setting up operations in Europe and the US, while American manufacturers are spreading to Japan and Europe.

Joining NEC in planning European manufacture are Hitachi, with a plant near Munich, and Fujitsu, which has a factory in Dublin. All three are also setting up assembly operations in the US, and Hitachi recently signed a second-source agreement with Hewlett-Packard.

SPL to sell gateway

by Donald Kennett

COMPANIES with large databases that they want to make widely available will probably be interested in SPL's agreement with Danet in West Germany to market its Dabit gateway software for information providers on public viewdata systems in the UK and elsewhere in Europe.

Danet is part-owned by the Bundespost and was involved in implementing the gateway software written for the Bundespost's Bildschirmtext viewdata test service by SDL in the UK. It went on to implement matching software for information providers' computers.

The Dabit software is SPL's first product for the viewdata market. It is available in versions to run under the CICS or Shadow teleprocessing systems on IBM mainframes or on Tandem or Digital Equipment minis.

SPL's command and control division managing director David Lamb said the product would initially be aimed at existing customers in the UK, Sweden, Holland and Italy. The system will support over 100 subscriber terminals simultaneously.

Govt looks set to sell Cambridge CadCentre

by David Craver

THE government's Computer Aided Design Centre in Cambridge is likely to be hived off to the private sector. ICL, which currently manages the CadCentre for the Department of Industry, would be a clear favourite to take it over.

ICL managing director Robb Wilmot is known to have discussed the centre's future with Information Technology Minister Kenneth Baker over the past few weeks. Baker announced at last week's CAD 82 exhibition in Brighton that "the time is now right for the CadCentre to operate as a fully commercial organisation".

The CadCentre was set up in 1969 to promote the use of CAD/CAM in the UK. Its annual budget is some £4 million, with nearly £2 million coming from consultancy services and royalties on its software products. All but a handful of the centre's 150 employees are from ICL.

Baker said he hopes "to keep the team intact," and that he wanted to ensure that none of the companies which use the CadCentre are cut off from its resources.

One such company is Compeda, whose managing director, Keith Trickett, said he would welcome the sale of the CadCentre to the private sector.

Compeda, which is wholly owned by the National Research Development Corp, now British Technology Group, is a major provider of money to the CadCentre, Trickett said. Compeda's plant design management system, PDSM, came from the centre, and Compeda provided it with over £750,000 in the past year in research and development and royalties, he added.

Trickett sees more advantage than disadvantage to the CadCentre being in the private sector, and hopes to be closely involved in any decisions. When Baker floated the idea of selling the centre he urged all involved UK companies to express their interest.

Counting House, BOC, Ferranti-Cetec, Kongsberg and ICL are among the companies which market the centre's products.

SPL organises UK 5th generation conference

by Boris Sedacca

THE government's reluctance to initiate Britain's response to Japan's Fifth Generation Computer Programme has prompted a leading UK software house into action.

In an enterprising move to co-ordinate plans of individual companies bracing themselves for the Japanese onslaught, SPL has made a strategic entry into the conference organising business with the help of an ex-Infotech man, Bob Muller.

SPL has also enlisted the help of Alex d'Agapeyeff, founder and ex-chairman of CAP, to chair SPL's Fifth Generation Computer Conference in July. D'Agapeyeff is currently chairman of the British Computer Society's specialist group on expert systems.

"We must forget about trying to catch up with the Japanese across the board. If our plans are too ambitious and our resources too scattered, we do not stand a chance. Our main strength is in software," he said.

D'Agapeyeff went on to say that he had never visited Japan, but the boldness of the Japanese Fifth Generation Report had come as a "brutal surprise" to Europe and the US.

Conference speakers will include Donald Michie, head of the Machine Intelligence Research Unit at Edinburgh University, and Hiroshi Yamada, head of the Japanese Fifth Generation Computer Project.

In the words of conference organiser Muller, "At the very least, Japan has set the world computing targets for the rest of the decade and beyond."

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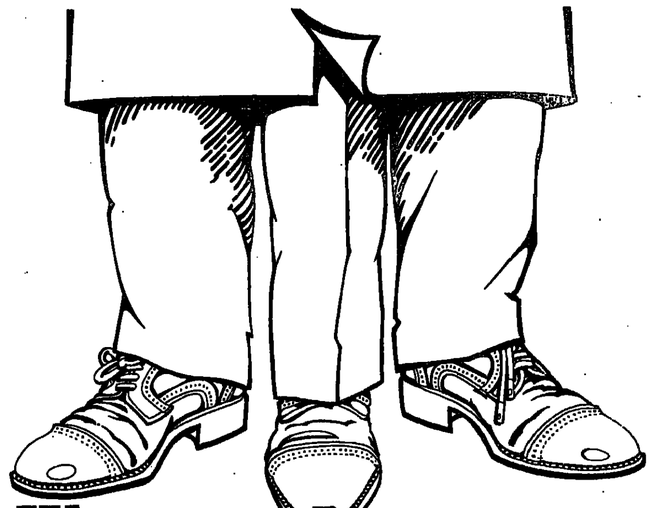

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Control Data pushes interface as standard

by Jon Whiteley

CONTROL Data Corp has started what could be a long drawn out campaign to get its Intelligent Standard Interface (ISI) adopted as a standard by the computer peripherals industry.

The ISI is a microprocessor-controlled box which could in theory match any peripheral with a certain CPU, or any CPU with a certain peripheral given a change of a simple bus adaptor.

Control Data claims currently to be the largest independent (non-IBM) computer peripherals manufacturer in the world, but flourishing new technologies, particularly in disc drives, have provided opportunities for small companies to begin to challenge collectively its might. This interface proposal is part of Control Data's response.

ISI is at present a proposed architecture which specifies the protocol and the physical interface. Control Data has supplied details of the ISI to Ansi (the American National Standards Institute) in the hope that this standards organisation will endorse the design. Ansi has not yet made a decision.

There already exists an Ansi standard interface, the X3T9/1226, which is 8-bit parallel and non-intelligent. In addition it is designed specifically for rigid disc drives rather than for all peripherals.

It is of a much more limited specification than the ISI but it is as yet not widely adopted, so this could not be a stumbling block to the ISI's adoption.

Grover Mullin, manager of OEM marketing at Control Data in Minneapolis, US, considers that the ISI is a much broader concept than Shugart Associates' recently announced SASI interface. As a demonstration of this, Control Data is considering making SASI a subset of ISI.

ISI would allow the OEM peripheral supplier to do most of the standard interfacing which would leave the OEM customers to do their own channel adapting and value-added programs. The ISI would provide another hardware solution to the growing software problem – increasingly expensive software can be used more efficiently by more flexible hardware configurations.

MULLIN . . . Hardware solution to a growing software problem.

Olivetti DP profits up

THE parent company of Olivetti data processing and office equipment increased its profits by a sharp 75% in 1981 to 87.8 billion Italian lira (approx £68 million) compared to the previous year. Turnover rose 23.5% to L1,362 billion.

Turnover of the whole Olivetti group rose 32.4% to L2,887 billion.

Electronic mail for HP3000

by David Craver

ELECTRONIC mail for Hewlett Packard's HP3000 users will be available from June. The software which was developed in the UK at HP's worldwide research and development centre at Pinewood allows any terminal that can be connected to an HP3000 to operate the HPMail service.

Messages, business charts and graphs, and data files can be exchanged on both local and remote computer systems. HPMail fits into HP's plans for the "interactive office", which already includes word processing hardware and software, text processing and report writing software, and graphics capability.

An electronic filing product is expected this year.

David Townsend, marketing manager of commercial systems at Pinewood, says that the electronic mail product has some personal filing capability – essentially incorporating what an individual would do at a desk.

ICL should improve service—CSA

by Maggie McLening

ICL is to be coaxed into providing a better service to independent software houses. The campaign will be led by the Software Products Committee of the Computing Services Association, according to its latest recruit, John Garrick.

Garrick, a director of Telecomputing with responsibility for the design of the company's best-selling TPS ICL teleprocessing monitor, has been invited to join the committee and participate in negotiations relating to ICL's policy towards CSA members.

"ICL needs to get together with software houses and bury the hatchet," commented Garrick. "We want to take advantage of their new style and bring pressure to bear so that promises can be turned into concrete effort."

He intends to suggest that there is a need for a more receptive environment within ICL for enquiries from independent software houses. "You can get information and specifications out of them, but you have to know exactly what you want. There is no facility for "Is there anything like this?", he explained.

Employed by ICL from 1969 to 1973, Garrick considers that ICL equipment is much more difficult to get to know than IBM's. He cites as an example the lack of an assembler-type language on ICL 2960 installations.

Commenting on ICL's Trader Point scheme, under which it joins forces with distributors, systems and software houses and bureaux to market small systems, he said: "This seems to have been carefully worked out to appear attractive to the third parties, and to have also considered the practical problems. However, Telecomputing is not really in the business of selling tin, so we would need something different."

He added that Telecomputing is "looking with interest" at Perq ICL's engineering graphics workstation, which he considers has an opening for applications specialists.

On the wider aspects of the role of the Software Products Committee, Garrick said that the CSA was anxious to play a more active role in seeing that money allocated by the Department of Industry is used for genuine software development, and not for redeveloping existing systems.

Voice storage market set to soar

by Donald Kennett

SYSTEMS for digitising and storing voice messages will have a $500 million market in the US by 1985, according to the Yankee Group market research company, despite the fact that currently installed systems are unpopular.

The European market overall for voice mail will show slower growth because many PTTs regard such services as falling under their monopolies and will insist on providing them themselves on a bureau basis.

Yankee Group analyst Karmen Guevara said at a recent seminar that significant improvements such as much cheaper mass storage, better quality voice recording and better user commands were needed before the systems were widely used.

Storage costs are high because of the complexity of the human voice, which requires about 64Kbits/second for reasonable reproduction.

It would also be impossible to sell systems on the basis of their greatest potential benefit which was to managerial productivity. This was too difficult to quantify.

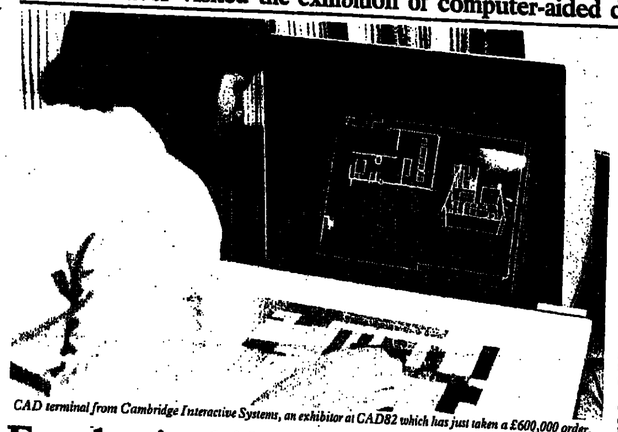
It is therefore necessary to sell systems on the basis of savings in telephone costs arising from the fact that fewer unsuccessful calls should be made and calls should be shorter.

Companies should identify specific application areas, for example where frequent uni-directional calls are made between the same groups and voice communications predominate, and the system should be implemented stage by stage with careful study of progress. Several such applications could then be interlinked.

The dominant supplier of voice message systems so far is Electronic Communications Systems of Richardson in Texas, it was set up in 1979 by Gordon Mathews, designer of the Watsbox used by companies to allow their customers to make long-distance 'phone calls to them at local call rates.

Other suppliers include Delphi, IBM and Voice & Data in the US, and OTL in the UK, but Guevara predicts that by the end of next year there will be 14 or more, including PABX manufacturers Mitel, Rolm, Intecom, and Northern Telecom. Datapoint will have voice messaging on its ARC local network.

David Craver visited the exhibition of computer-aided design systems which was held at Brighton last week



CAD terminal from Cambridge Interactive Systems, an exhibitor at CAD82 which has just taken a £600,000 order.

UK not seizing opportunities CAD offers, says Minister

THE bulk of UK industry is failing to use computer-aided design and manufacture techniques to increase its competitiveness. While they are not a solution to all the UK's economic ills, industry will only remain competitive if designers are given the best available tools for their work.

This was the message of Information Technology Minister Kenneth Baker as he opened the CAD exhibition in Brighton last week. He forecast a world market for CAD/CAM tools of some £100 million annually in five years, with the UK market about one tenth of the total.

There was a heavy turnout of exhibitors and visitors, with most of the main contenders in the CAD battle present in force. IBM was a notable exception.

Erik Arnold, a Fellow of the University of Sussex who has been studying the CAD/CAM market, said in a conference report that most users of the new technology are still in the experimental stage.

Arnold has been doing research with senior fellow Peter Senker for the Engineering Industry Training Board to assist it in planning future requirements. Most installations use manpower savings as a cost justification before buying systems, he found, although there does not tend to be much effect on manning levels in the experimental stages.

But he added that industrial relations, along with getting software that works and effective management, cause most of the delays in getting CAD/CAM systems installed.

From 60% to 65% of UK CAD installations have hardware and software of US origin, with the figure by value probably much greater since those using UK equipment tend to be much smaller, Arnold said. While the US companies tend towards broad, all-purpose equipment, he pointed to UK strength in solid/surface modelling, printed circuit board design, and process design.

In the long term CAD could cause serious job losses, and the draughtsman could become an endangered species, Arnold said. Of particular concern is that the initial job losses occur at the lowest level of the hierarchy.

Emphasis shifts to smaller systems

THE shift from big turnkey systems towards smaller systems for smaller users was widely apparent at last week's CAD82 exhibition. As the cost of 32-bit systems continues to drop, the accessibility of powerful computer-aided design and manufacture systems is coming within the range of a broader band of users.

£70,000 to £100,000 is what is now considered cheap by most. But set up on a table in the midst of the busy exhibition hall, with an extension cord trailing up to an overhead point, was a £500 CAD system on a 32-Kbyte Commodore Pet from Ergon Design of Banstead.

More representative of current developments in CAD was Kongsberg's new interactive three-dimensional drafting system, running on a 32-bit Digital Equipment VAX. Priced at £97,000, the system marks a change in the Norwegian company's usual role.

Perkin-Elmer was one of those which put emphasis on manufacture rather than design, with a spokesman commenting that many of the exhibitors "have a lot of pretty graphics, but you can't really do anything with them". P-E announced an agreement with Lockheed to market its Cadam (Computer Augmented Design and Manufacturing) system on P-E's 32-bit minis.

There was a good deal of interest in ICL's Perq, which was shown with the Cadraw graphics system, developed by consulting engineers Ove Arup.

Control Data made public its Cybercad bureau service, which promises complete CAD/DAM facilities for anyone with a telephone line and a power supply.

Savings at the manufacturing end

THE cry that too much attention was being paid to the design and not enough to the manufacturing side of CAD/CAM was made by a number of exhibitors at CAD82 in Brighton last week.

But it is at the manufacturing end that the real savings can be made, says Keith Trickett, managing director of Compeda. Compeda announced last week the first production version of its Integrated Design, Engineering and Manufacturing System, Idems, which manages projects from design to manufacture.

Idems, like Compeda's other software products for computer-aided engineering, is hardware independent. It is built around a central communications database, which can link the various aspects of design, analysis, and manufacture.

Trickett, touting the UK origins of Compeda which is wholly-owned by the National Research Development Group (now British Technology Group), said that in plant design systems the company is "a worldbeater".

He was referring to the Plant Design Management System, which is going particularly well in the US.

Three new collaborative marketing agreements were also announced by Trickett; with ICL to market its Ieoplot (now to be called Isogen) software to draw pipe detailing isometrics; with British Aerospace, to market a numerical control package APT-140 which will be included as the key machining module in Idems; and with Isopipe, for an interactive front end for PDMS.

Compeda has also agreed to put its two-dimensional general drafting system, Drawit, on ICL's Perq microcomputer.

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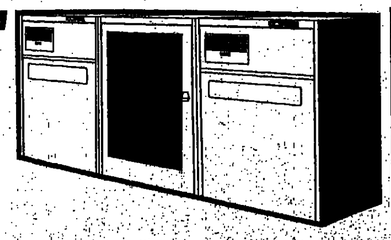

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WILDEN . . . "60% of first time users have a bad experience."

Software house enters the Japanese market

by Maggie McLening

JAPANESE sales worth over £20,000 in the first year have been predicted for Compact Accounting's software, by the company's new Tokyo agent, Yaskawa Information Systems.

An initial exclusive agency agreement has been signed between the two companies, following the recent Information Technology Exhibition held in Tokyo, where Compact Accounting demonstrated its CP/M based range of accounting packages.

The product which aroused the most Japanese interest, however, was Compact's powerful program generator, Nucleus, which has a built-in, fast file access ISAM facility.

According to Compact's marketing director David Parsons, the new Tokyo agent, which is part of the Yaskawa Electric Group, is to sell software to other manufacturers such as Hitachi, Toshiba and NEC for turnkey packages.

"We want to tackle the 8-bit and 16-bit machines at source, and get in through the back door," explained Parsons.

Nucleus already has an established user base in the UK, Australia, the US and Singapore, on a growing variety of equipment, with versions running under CP/M and Unix operating systems. It is also to be implemented on the ACT Sirius I 16-bit microcomputer as soon as Microsoft's Basic 86 compiler is released.

Marketing the Sirius package, which includes Compact's software, is systems house Zenithplan, formed just four months ago to sell Sirius equipment. Despite its recent entry into the marketplace, and the fact that it has been selling for only six weeks, the company has managed to sell 12 systems.

Zenithplan says that Compact's accounting, stock control, order processing and payroll packages were chosen because they were tried and tested.

"About 60% of first-time users have a bad experience, and we aim to use our background in running companies to avoid that," commented Bruce Wilden, managing director of Zenithplan.

Lloyd's steps up fraud policies

by Kevan Pearson

BANKS using computers and electronic funds transfer (EFT) are causing new problems for insurance underwriters. Interference with data about credits and debits while in transit by an electronic system are not covered by normal business insurance and this has led to the development of new and complex computer crime policies by underwriters at Lloyd's of London.

The first such policy, Lloyd's Electronic and Computer Crime Policy, was launched last year, following two years of research after a massive $10 million fraud perpetrated against a Los Angeles bank.

The policy deals specifically with the intrusion of third parties into an electronic transfer of funds with the intention of committing a fraud. It does not cover fraud by a company's own employees, or outsiders working with an employee since this is covered under existing employee liability insurance.

The new policy arose because of the need for precise definitions of the technologies used and the risks involved. Previously the non-material transfer of funds was achieved by use of the telex system, and this is named in policies, says Colin Spreckley, leading underwriter with K. F. Alder, and one of the architects of the new Lloyd's policy. Such policies would not cover computer-based EFT systems, Spreckley explains.

There are 29 EFT systems in use by banks, including several international ones, which have increased substantially the opportunity for computer fraud outside the banks' own premises.

SPRECKLEY . . . New Lloyd's policy follows massive US fraud.

The policy requires a detailed application, and a thorough "risk audit" of the institution and the systems to be used. These requirements have led to a lot of criticism from banks in the US, where there are 15,000 banks ranging from the large Bank of America and Citibank to the smallest State bank.

Spreckley defends the policy, saying that it "offers a very wide cover and to do that we need to have very detailed knowledge of how risks are managed at the company, from the point of view of computer security."

MICRO NEWS

Currys brings micro shops to London

by David Craver

CURRYS' attempt to establish high street shops as the place to buy business microcomputers faces its biggest test with the opening of the first Micro-C store in London. This is its tenth specialist retail outlet in the UK, and the network will double in size by the spring of next year.

About 75% of the existing trade of Micro-C stores is with businesses rather than the individual and personal market, which reflects the trend for manufacturers to sell their small business systems through distributors rather than direct, says managing director Derek Moon.

Micro-C could soon be selling the new 16-bit Hitachi microcomputer, which would be its first experience with 16-bit machines. the company is also looking at 16-bit systems from Sirius, IBM and Panasonic, but Moon says he is not yet happy with the available software packages.

But "the market is coming down to meet us," Moon asserts, and he adds that the drop in hardware costs means it will not be long before 32-bit machines can be bought in the high street.

"London is the most demanding market for business systems," Moon says, and the success of the new store in Hampstead will be critical in making future plans.

Moon admits that the expansion of the microcomputer stores has been slower than anticipated, with original expectations that there would be 20 outlets by this time last year.

The problem has been finding suitable software packages – he quotes a 90% reject rate – and the difficulty of acquiring good high street properties. The initial plan to incorporate the microcomputer operation within existing Currys stores has been scrapped, Moon says – it needs too much space.

Some big orders from big companies have been generated from the Micro-C shops, with Esso a notable example. The first contact was made at the Micro-C branch in Southampton, where a local Esso office bought a few machines. Their satisfaction led to a national multiple machine order, handled by the London office, Moon says.

While not as big as Tandy or Computerland – which also sell other electrical goods in total sales, Moon says, "As microcomputer specialists I think we have to be the biggest on the street." The company has been growing at 35% a quarter.

Moon makes much of Micro-C's hardware and software support, and says "manufacturers have a lot to do in this market – they just drop equipment on you and leave."

MOON . . . "London is the most demanding market for business systems."

Customised chips to mix and match 'for a tenth of usual price'

by Robert Parry

MIX-AND-MATCH microcomputer chips tailored to fit customers' needs for a tenth of the price of developing current custom devices is the promise held out by American Microsystems with its alterable microcomputer unit, AMU.

AMI's marketing manager for the AMU, Lyle Supp, says custom microcomputers cost about $1 million to develop and take about two years to complete. With the AMU, he claims design time will be halved and the cost reduced to less than $100,000.

And it should deliver greater processing power.

AMU is based around building blocks, a sort of cell system for building up a custom microprocessor. It has a 16-bit arithmetic and logic unit with an 8-bit internal data bus in a CPU based on the design of the Texas Instruments 9940 – a silicon efficient design, according to Supp.

Around this core CPU, tailor-made memory and I/O channels can be bolted on to create modules of the required bit width. Users are not constrained to 8-bit or 16-bit modules.

Linear functions such as analogue-to-digital and digital-to-analogue converters, filters and comparators can also be included on the chip, opening the way to applications in telecommunications, signal processing and control.

Standard components from semiconductor manufacturers offer various quantities of memory and I/O functions, but still impose compromises in systems on users.

First chips in the AMU family will include a prototype processor (AMU/PR), a counter-timer and a general-purpose interface chip. They will be made in CMOS and the first silicon for the AMU/PR should appear soon.

Telecoms contract

by Donald Kennett

THE contract to recommend the government's internal telecommunications strategy for the next 10 years has gone to office systems consultancy Eosys (formerly Urwick Nexos) and software house F International.

The two companies were one of three teams appointed last November to submit project definition reports for the strategy study.

The study is to be submitted to the Central Computer and Telecommunications Agency by the end of the year. It is to cover the voice, data and office systems telecommunications requirements of 500 government offices throughout the UK. They are currently linked by a network of leased lines.

Directors of Eosys recently bought their firm out of the government-backed Nexos office systems company when it collapsed. They are David Firnberg, Maryanne Chandor, Diana Duggan and Gordon Dean.

Chairman is Sir Anthony Burney, once an ICL director.

Tandy will talk to ICL

by Kevan Pearson

TRANSFORMATION of microcomputers into intelligent terminals for mainframes is attracting a lot of interest and another company has now entered the market with a US-designed system enabling Tandy TRS 80 III micros to talk with ICL mainframes.

The system, complete with hardware, costs just under £1,990 and is sold in the UK by Leeds-based Micro Mainframe Interfaces. The system features communications interfaces for ICL equipment and supports the company's CO1 protocol.

Software for IBM's 3270 protocol is under development.

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Piiceon names second UK 16-bit distributor

by Robert Parry

KEEPING the UK 16-bit microcomputer market simmering, US manufacturer Pliceon has found a second distributor for its products. Newbury-based Magnetic Peripherals joins Micro Networks of London in stocking the PM1000 microcomputer and the PM2010 intelligent terminal.

Both machines are based on Intel's 8086 microprocessor and feature an A4-size screen allowing 66 lines across 80 columns. According to Magnetic Peripherals, it is this screen that has aroused most interest, as it allows users to see what their page of text will really look like.

Because of this it will concentrate on the word processing market, where it will not overlap particularly with the established dealer Micro Networks.

The PM1000 comes with up to 256K RAM and floppy drives, starting at £6,000. Languages running under CP/M86 include Basic and Pascal, and CIS Cobol is available.

A lack of application software is seen as a distinct handicap by Micro Networks' managing director, Bernd Lissok. Since it introduced the range a year ago Micro Networks has sold ten systems, but could have sold three or four times that amount had there been software, Lissok says.

Most of its customers so far have been universities or colleges, which have software writing capabilities of their own, but Lissock says that Boots is currently evaluating the machine as a standard workstation, as is Plessey for the Ministry of Defence.

Recent additions to the range of 16-bit machines for this country have favoured the 68000 microprocessor from Motorola, which is gaining ground against the Intel 8086 at the high end of the market particularly.

But lower down the market, for the 16-bit personal computer, Intel devices are reinforcing their position.

Japanese manufacturers Hitachi and Mitsubishi both have microcomputers based on the 8088 – compatible with the 8086 but with an 8-bit external bus – in Japan, which are expected to spread to the US this summer and on to the UK some time later.

SOFTWARE FILE — *by Maggie McLening*

Doctors' charitable trust threatens to kill off commercial market

THE seemingly easy market for doctors' systems may turn out tougher than expected.

Lack of government money for loans to encourage GPs to computerise, and the sort of teething-trouble horror stories that dogged the progress of early business systems, appear to be making doctors think twice before buying. Many are setting unrealistically low ceilings on their expenditure because it is their own cash that is involved.

Plans to set up a charitable trust to supply specially developed software to member doctors paying only a £150 joining fee and a £15 annual subscription, would effectively kill the commercial market altogether.

The scheme's originator, GP Alistair Malcolm, has resigned from the joint computer services committee of the British Medical Association and the Royal College of General Practitioners, which has hitherto co-operated with commercial companies, because of "a clash of interests".

Response to the trust, which has had three programs written by an independent author, covering patient registration, repeat prescriptions, and chronic illness monitoring, has so far been limited. Only one hardware company, Apple Computer, has agreed to participate by allowing 50 dealers to supply medical software free to trust members.

This might be a drop in the ocean at the moment, but publicity from the plethora of recently launched free magazines for GPs and free information services is bound to generate support. This will mean commercial companies will have to raise the level of their competition and lower their prices to stay in business, possibly by using cheaper hardware.

One company which anticipated the swing in the market is British Medical Data Systems, which has brought out "the Cortina equivalent of our Volvo GP60 system", according to John Wells, sales and marketing manager.

The GP20, which has the capability for up to 20,000 patient records, has been developed for the Z80A chip-based Cifer microcomputer, manufactured by Wiltshire-based Cifer Systems.

"In 1979 we started developing the GP60 system for Alpha Micro machines, then decided about a year ago to go to the smaller end of the market," commented Colin Waywell, general manager at BMDS. "We waited for British hardware, a reliable operating system and means of supporting GPs."

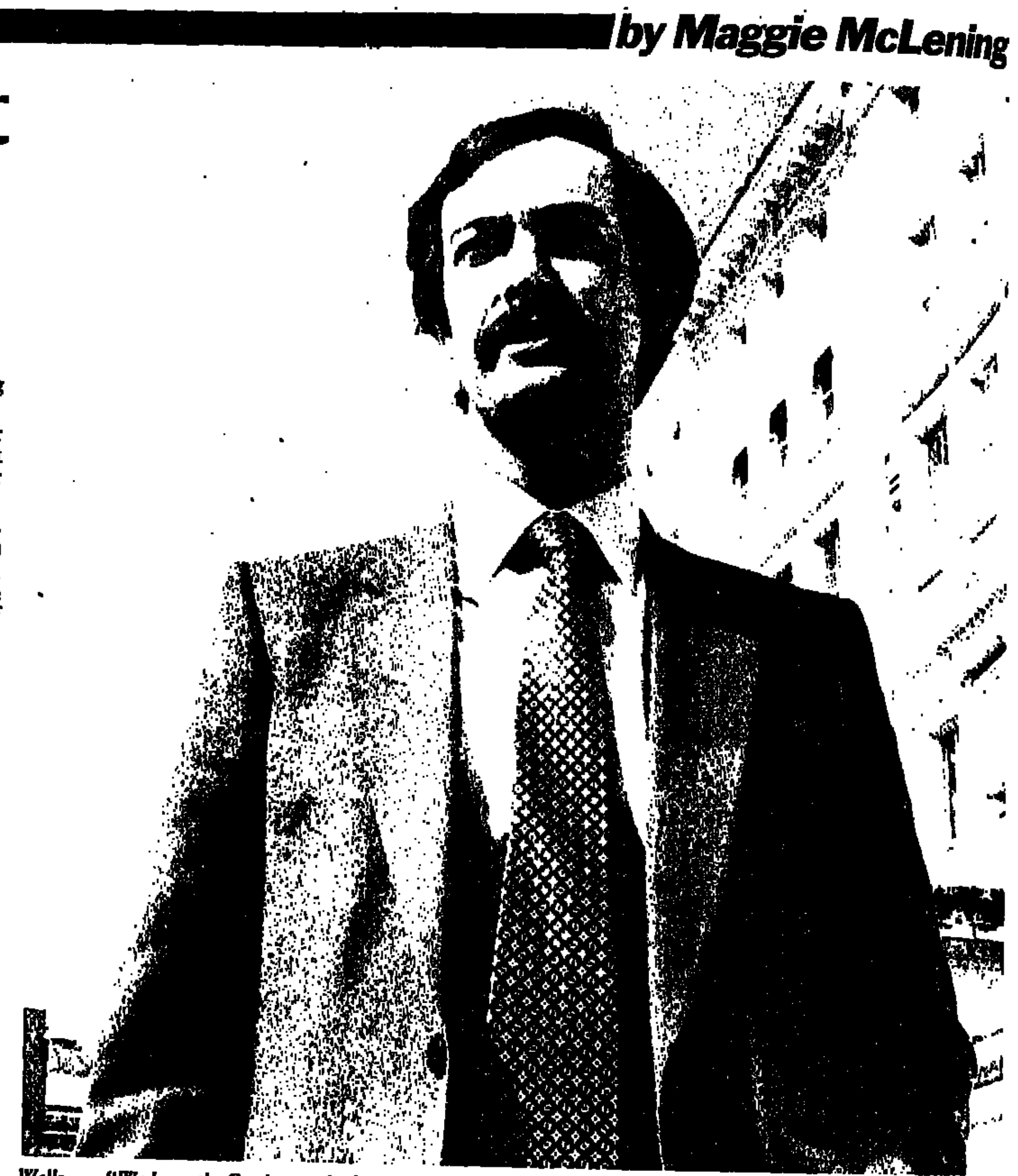
"We have opted for a single-user micro system because we didn't want to cut down on customer support," confirmed Wells.

Costs of the system are dramatically less than for the GP60 system, which starts at £10,000. Prices for the GP20 are variable according to the amount of memory and software modules required, with the basic Repeat Prescription Software using a two-400 Kbyte floppy disc system selling for £3,950 exclusive of VAT.

Further options include word processing facilities and selection modules to analyse statistics for such bodies as the Family Practitioner Committees. As the operating system used is CP/M, the standard for 8-bit micros, the GP would also have a wealth of financial packages available to complete a surgery management system.

Wells considers that computerisation offers the GP more benefits than are immediately obvious.

"Installing a computer acts as a catalyst for a complete review of the medical system operating in group practices," he said. "Compiling the drugs list for the repeat prescription system reveals great variations in prescribing habits."



Wells . . . "We have the Cortina equivalent of our Volvo GP60 system."

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DG boost for information system languages

MORE concerned with productivity than with the soul of its Eclipse machine, Data General has announced a series of language enhancements and productivity aids for the 16- and 32-bit information systems.

Programming language AOS/VS Basic for the 32-bit system now contains functional enhancements to facilitate writing of interactive programs and to allow them to take full advantage of the INFOS File Management System.

The SWAT high-level language debugger, introduced with the Eclipse MV/8000, can now support 32-bit Cobol under AOS/VS and 16-bit Ansi Fortran 77 under AOS, as well as the original languages 16- and 32-bit PL/I and 32-bit Fortran 77.

A new capability has been added to allow the debugger to interact with the lower-level assembly language debugger, which should give users a closer view into a program.

Data General has also announced enhancements to AOS/VS APL, its 32-bit version of the language. It claims to have increased runtime performance by adding support for enclosed arrays, and a powerful screen-oriented editor.

According to Bill Cadogan, systems engineering manager for the UK and Ireland, this makes many functions run between three and five times faster.

"APL has traditionally been the province of large mainframe suppliers. Now the high performance implementation by Data General makes installation on a minicomputer a feasible and, indeed, a highly attractive proposition."

APL is becoming increasingly used for commercial applications, and Cadogan added that banks, insurance companies and others in the financial sector are showing interest in the product. Data General itself uses APL internally for financial planning applications.

The licence fee for AOS/VS APL is currently £9,684.40, including installation, training, 90-day warranty and subscription update service. Users who have the Software Subscription Service (SSS) will receive new versions of the software free.

SOFTWARE MONTH

COMPUTER WEEKLY'S SOFTWARE SUPPLEMENT

Computer Weekly was the first general computer journal to give software its own space when Software File was introduced for weekly news reports. Now the time has come to expand the coverage further.

Edited by our Software Editor Claire Gooding, Software Month will devote its whole coverage to one subject each month. The topics are listed below.

But included each month will be a news round-up, highlighting important events of the past month, and a column by consultant David Ferris on the increasingly important business side of software and the companies which market it.

PROGRAMME FOR 1982

April 22: Database
May 13: Financial and project planning
June 10: DEC systems
July 15: Payroll packages
August 12: Integrated Office software
September 9: Program productivity – program generators and high-level languages
October 7: Word processing
November 4: City software
December 2: CAD/CAM and scientific software

● For advertising within Software Month contact Gordon Bradley, 01-661 3128.

New image for the milkman

THE challenge of a weekly row with the milkman could disappear from our lives if dairies adopt a system developed by C. M. Computer Systems of Wiltshire. In addition to office accounting procedures, it also creates a detailed roundsman's book complete with customer receipts.

"We believe it will go a long way towards eliminating doorstep disputes between milkman and housewife, which are so often the result of inadequate or illegible recording methods," said Chris Wright, managing director of C. M. Computer Systems.

A weekly rounds book is created for each deliveryman showing customers' names and addresses, with details of the amount and type of goods to be delivered. The system will cater for groceries delivered by the milkman as well as dairy products, and will also record competition and Christmas Club contributions.

Any alterations to existing information are written into the book by the milkman during his round, then fed into the system on his return to the dairy.

C. M. Computer Systems claims that it is possible to combine stock and sales information to balance each round within 10 minutes of the roundsman's return to the depot.

Eliminating doorstep disputes with the milkman.

Written in extended Basic, the dairy round suite comprises a menu of ten functions which include payroll and purchase ledger facilities in addition to the stock control and customer information sections.

Hardware used is Southwest Technical Products' S/09 microcomputer, based around the Motorola 6809 microprocessor, which can support up to 12 terminals. Wright believes that this offers maximum flexibility for the system.

The cost of the system for a dairy with 2,000 customers and 999 product lines would be about £12,010, complete with one year's on-site service.

SOFTWARE BRIEF

Information on 1,500 delegates

CITY-BASED consultants Electronic Office Services has launched a conference accounting and administration turnkey package which it claims is half the price of its nearest rival.

Costing £1,375 plus VAT, Conference Controller can store information on up to 1,500 delegates and runs on Apple microcomputers. Versions for Sirius and IBM hardware will follow shortly.

Booting routines

AUTOMATIC program booting routines are included in the Utility package for Superbrains, developed by Slough-based KGB Micros. Designed to speed application development on any system based on the Z80 chip or on an Apple or Pet with a softcard, Utility costs £57.50 by mail order.

Planning package

POPULAR financial planning package Micromodeller is now available for use on Southwest Technical Products (Computers) S/09 small business computer. There is currently a version for machines with the Flex operating system. One for Uniflex will be offered shortly.

COMPANY NEWS — *by Kevin Cahill*

Irish start-up scheme pays dividends in job creation

IN a bid to break the back of two of the worst obstacles to small businesses start-ups in the computer industry, the Irish government launched, four years ago, a unique cash and tax incentive package for computer entrepreneurs.

In summary, the government will give an EDP (electronic data processing) start-up company a basket of loans and grants equal to £9 for every £1 put up by the entrepreneur, with an interest subsidy on the borrowings, and no tax on the dividends.

The scheme, initiated in 1978, has been little publicised outside Ireland to date, but its success so far can be readily demonstrated in two ways.

Firstly, the average cost to the UK government of setting up a new job is reckoned to be around £25,000.

The enterprise development scheme, as it is called, has been used to start 103 projects so far, at a gross cost to the Irish government of £43.2 million, in exchange for 4,250 jobs. That, for those whose arithmetic is slow, is less than £10,000 per job created.

Secondly, the appraisal techniques of the IDA appear to be very successful in relation to the choice of projects backed.

Cyril Kerr, the manager of Datac, which manufactures data capture and monitoring equipment for use by large communications and power utilities, puts it like this: "Without the specific aid provided by the scheme, I might still be with my old company."

Kerr has so far put up £40,000 of his own money, which has been matched to date by £80,000 in guaranteed loans, and £70,000 in grants.

According to Kerr, the project, which he put to the IDA in November 1981 and which was approved by March 1982, was carefully looked at by the IDA assessors. "In the business plan, which ran to 80 pages, I proposed to manufacture the equipment under licence from a German company. The IDA looked at our market projections, and were able to go to some of the customers we identified and ask them if there was a market.

"Fortunately for us, not only did the companies approached confirm the kind of market projected – they also said they'd buy from us if we went into business."

So far Kerr has built and sold 30 units. Turnover is approaching £300,000 and Datac has a staff of 13, including four assembler language software programmers. He is now amending the German company's original operating software using his own staff, and has started to export back to the licensing company.

KERR . . . A recent successful beneficiary of the IDA enterprise scheme.

Most of Kerr's principal componentry, including printed circuit boards, comes from Ireland. This cuts down imports, creates peripheral employment and reduces Ireland's foreign exchange problems.

The speed at which Kerr has taken on staff at his first-floor factory, sited close to the centre of Dublin in a rebuilt warehouse reminiscent of some of London's dockside development, is also interesting.

For a set government investment of £70,000, he has created 13 jobs, at a unit cost of about £5,500, or a gross cost of £11,000 if the loans are taken into account.

Kerr points out that dividends on his shares are tax-free where the dividends are derived from exports.

Up till now, most of his customers have been Irish state corporations and utilities, such as the Electricity Supply Board and the railway company CIE. This has given him an excellent home customer base and saved the government some expensive foreign currency import payments. But is has not enabled Kerr to make his dividends eligible for full tax relief.

So he is now going for new overseas markets on the Continent and in the Middle East.

Ed MacDonald, the IDA manager responsible for the project, insists that the scheme is primarily intended to tap entrepreneurial skills which are hidden in corporate managers in Ireland, but there is considerable scope for overseas participation. Licences to manufacture have often come from abroad, particularly America.

Noticeably, none of the IDA or bank involvement requires the entrepreneur to part with any of his equity, or to create second or subsequent mortgages on his house.

The two curses of the UK entrepreneur are lack of cash and taxation. The Irish government scheme addresses those two problems head-on, and seems to have arrived at an unusually good form of the "I'm OK, You're OK" equation.

And by offering tax-free dividends in return for exports the government eases its foreign exchange borrowing requirement, which is currently far too high.

The UK, on the other hand, is burdened by a somewhat blind bureaucracy, which overlooks not only the activities of its Irish neighbours and rivals, but the low tax environment of the Victorian era which created so much of British industry.

The UK also suffers from a number of financial institutions which are trying to act like American venture capital institutions, without having taken detailed account of the environmental differences between the UK and the US. One consequence of this is that the percentage equity stake an entrepreneur is required to part with in the UK in order to get some cash, is high. Small companies are currently being asked to part with an average of 40% of their shares in return for sums of between £80,000 and £250,000.

Most banks warn about asking for enough money in the beginning and most UK entrepreneurs don't have the nerve to say what's really required. But the IDA has created a formula that meets the real mid-'80s need. An entrepreneur approaching the IDA with the £250,000 needed to start a company, could realistically hope to raise £2.5 million to get into the international marketplace.

However, both the IDA and UK financial institutions suffer from one obsession. Both groups of financiers seem determined to scour America for licences and patents to be turned into manufactured goods in the UK (and Ireland). The facts of the matter are that many US patents or manufacturing processes, particularly in the computer industry, originated in the UK.

It would be much more appropriate if the government and UK financial bodies got their act together as the IDA has.

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CW SHARES TABLE

Date 29/3/82 — Index: 98.29 — Change +1.28

London Stock Exchange

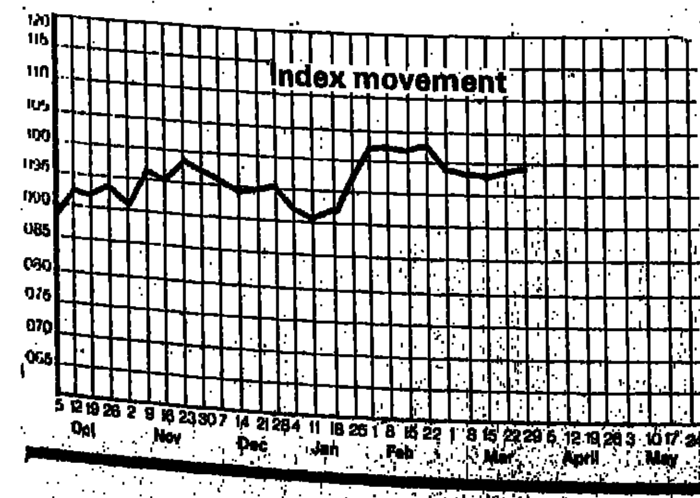
1982 High (pence)	1982 Low (pence)	Stock	Price (pence)	C'nge
183	161	ACT (App Comp) (25p)	180	–
174	150	BOC Int. (25p)	168	– 1
23	19	B Bov Kent (20p)	19	–
117	101	Chubb (20p)	116	– 1
80	48	Cole Group (25p)	80	+ 1
260	270	C.A.S.E. (20p)	238	–
720	628	De La Rue (25p)	625	– 5
280	235	Extel (25p)	278	–
670	625	Ferranti (50p)	648	– 2
647	602	GEC (25p)	614	– 2
51	33	ICL (25p)	47	+ 1
47	41	Kalamazoo (10p)	46	–
277	223	Kode Int (25p)	265	– 2
279	216	Memec (10p)	272	– 6
132	110	Muirhead (25p)	120	–
278	218	N'mia ('81) (£0.05)	233	+ 6
£35½	£28½	Norsk Data	£31	– £½
315	286	Office & Elect (25p)	316	–
505	445	Philips Lamp (fl10)	497	+ 7
388	348	Plessey (50p)	373	– 3
97	75	Quest Auto (10p)	75	– 5
436	363	Racal Elect (25p)	373	– 3
223	171	Rediffusion (25p)	376	+ 3
468	416	Thorn-EMI (25p)	416	– 13
90	78	UC&T (50p)	78	–
		OTHER MARKETS*		
80	80	Bus Comp (10p)	86	–
567	415	Comp Serv (£1)	415	–
118	78	Consult (C&F) (10p)	118	+ 8
170	176½	NMW (£1)	170	+ 44½
55	43	Rolfe & Nolan (10p)	43	– 2
106	78	ScanData (10p)	86	–
195	188	Star Comp (10p)	188	–
109	104	Tridera Comp (10p)	104	–
95	82	Zygal Dyn (5p)	82	– 3

US Stock

1982 High ($)	1982 Low ($)	Stock	Price ($)	C'nge
28½	19¾	Amdahl	19¾	– 1
20¾	14¾	Apple Inc	16¾	– ½
27	23¼	Auto Data Pro	27	+ ½
38½	31	Burroughs	33¾	– 1
48¾	36¼	Commodore	40	– 1¼
13¼	8¾	Comp Auto	9¼	–
15	12¾	Comp Sciences	13¼	– ¼
18½	12¼	Comshare	12½	–
38½	30¼	Control Data	30½	– 2
30¼	27	Cray Research	27	– ¾
63¼	28¾	Data General	31¾	– ¾
40½	20½	Datapoint	22	– 2¼
20½	17½	Dataproducts	20¼	–
87½	72½	Digital Equip	74¼	– 8½
23¾	19¾	Elec Data Sys	21	– ½
8½	3¾	Gen Automation	4½	–
36¾	28¾	Harris	29¾	– ¼
43½	38¾	Hewlett-Packard	40	– 2
78	63	Honeywell	65	– 2¾
28	20¾	Intel	21½	– ½
62¾	57	IBM	59	– ½
56	45½	Litton Ind	45½	– 2½
12¾	10	MDS (Mohawk D)	11¼	– ¼
22	18	MSA (Mngmnt Sci)	18	–
12¼	10	Mngmnt Assist	12¼	–
8¾	6¾	Modular	7¼	–
67¾	60¾	Motorola	65½	– 2¼
22	18¼	National Semi	21½	– ½
45¾	40½	NCR	42	+ ¼
28¾	19	Perkin-Elmer	21	– ⅜
23¾	17¾	Prime	19½	– ⅛
36¾	29¾	Raytheon	32½	– 1
28¼	20¼	Signal	20¾	+ ½
34	27¼	Sperry Comp	28¾	– ½
34½	24½	Storage Tech	26	– 1¼
27½	23½	Tandem	24	– ¾
36	28	Tandy	29¾	– 1½
82¼	70¾	Texas Inst	78½	– 3¾
27¼	18¾	Tymshare	18½	+ ¾
35¾	27	Wang Lab B	27	– 2¼
9	7½	Wyly	8	–

Table shows the closing prices of The London Stock Exchange on Monday and in America on Friday. The share index is based on the prices of the UK companies in the table. Highs and Lows have been adjusted where necessary.

** Shares traded on the Unlisted Securities Market or under Rule 163(2)(a).*



Needy companies will meet financiers at electronics conference

IN a major bid to help electronics companies raise funds for development and expansion *Electronics Weekly*, sister paper to *Computer Weekly*, is running a special conference on May 25.

Believed to be the first of its kind in the electronics industry, the conference will be a one-day event and is being jointly sponsored by Electronics Weekly and the Midland Bank.

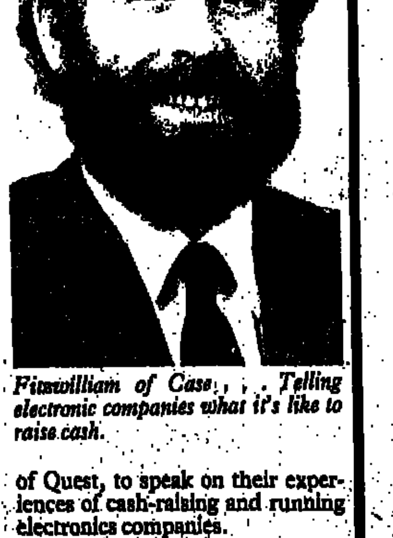
The aim is to bring together small and medium-sized electronics companies and some of the best sources of finance in the UK.

The conference will be chaired by George Gilhespy, a general manager from the Midland Bank's corporate finance department, and he will be supported by Colin Amies, a director of corporate finance at the Midland and a former electronics company executive.

Other speakers at the conference include Peter Minton, the electronics industry analyst from stockbrokers Laing and Cruikshank, and Geoff Taylor, managing director of TDC, the venture capital arm of the Industrial and Commercial Finance Corporation.

According to Mick Elliott, the editor of Electronics Weekly, the primary aim of the conference is to bring together financiers willing to put up money for electronics companies, and companies, particularly small and medium-sized ones, which need funds.

To make the conference itself more directly relevant to participants, Elliott has arranged for four senior managers from electronics companies, including Duncan Fitzwilliam of Case and Tony Ebel of Quest, to speak on their experiences of cash-raising and running electronics companies.



Fitzwilliam of Case . . . Telling electronic companies what it's like to raise cash.

The conference is expected to draw a significant number of finance people from the City who will have opportunities for informal talks with companies attending, at the various breaks and at the reception which the Midland has arranged for the end of the day.

Details of the conference are available from Sue Bonnell, IPC Conferences, Surrey House, Throwley Way, Sutton, Surrey SM1 4QQ. Tel: 01-643 8040.

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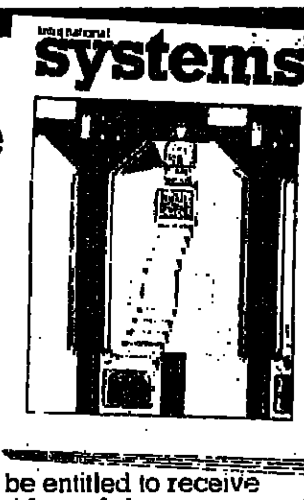

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HUMAN TOUCH

A spanner in the works

Cliff Dilloway is an independent consultant specialising in accounting software, taxation and payroll.

THE screen says it all. There it is – Enter Account Number. The marvels of information technology stopped dead by the need for the simple manual operation of looking up the account number.

Turnaround documents I can discuss another day. For the moment, consider alternatives to requiring the entry clerk to know the account number before a system can be used.

Airlines had to tackle this problem with some of the first widespread applications of VDUs. Aeroplane passengers have to be identified by name because it is a legal requirement in case the aircraft is lost, and because it is the only acceptable business arrangement.

So airline passengers make their bookings by name and the ticket is more a payment docket nearly as good as money, as you will find when you change your flight between airlines and destinations.

Getting into an airline reservation system by passenger name presents severe problems not readily solved by being thrown back on the entry clerk as in our example above.

Mr Common Name (Jones, Smith, etc) is accustomed to giving his initials and if it is the common "J" will supply his forenames.

Mr Unintelligible on account of a poor telephone line, a strong accent or both is more of a problem and some redundancy like "When did you book" or "Where are you going on to" may be necessary to identify positively the correct record.

These are problems of identifying the people. What help can the computer give in identifying the record? Airline systems designers cause their computers to come back with a numbered hit-list of possibles.

To make the finding of the right account in a ledger system dependent on pre-knowledge of its account number is to make the human the slave of the computer, not the other way round.

Cliff Dilloway

10 YEARS AGO

From Computer Weekly of April 6, 1972

LEASCO Systems and Research, Logica and Leonard Griffiths and Associates each won contracts worth £15,000 to investigate suitable software for the Ministry of Defence's Grid 77 network . . . Nixdorf and Control Data planned to develop jointly a general purpose minicomputer . . . The first section of the new centrally controlled and computer-monitored national motorway signalling system became operational on 85 miles of the M6 and M62 in Cheshire, Lancashire and Yorkshire . . . CSC won a $43 million contract to provide a national teleprocessing network for US federal government agencies.

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GILB'S MYTHODOLOGY

Fundamental principles of Infotecture

Tom Gilb is an independent consultant, lecturer and author on computing topics.

"INFOTECTURE" is derived from a French word. I take it to mean "information systems architecture".

There are some fundamental principles of infotecture. And I believe these principles are useful in practice – in fact, they are taken from my own practical work as a consultant.

I will list the first set of principles below.

1. We should attempt to identify the highest level of goals which apply to the system in question.
2. Goals should be stated so that they are as objectively interpretable as possible.
3. We should clearly separate the specification of the two basic goal types: Attributes (qualities or resources which can be measured on a scale) and Functions (required things, which are measurable by presence or absence).
4. Techniques are the optional methods, products, ideas, and structures which we design into the system exclusively for the purpose of meeting one or more attribute goals.
5. A single technique will inevitably affect several critical attributes of the system at once. Some of these effects will be planned and desirable. Some effects, however, will be unplanned and will be undesirable.
6. We must, therefore, emphasise the art of controlling all attributes of the techniques we use. This art must include collecting experience on effects of techniques, methods for estimating the cumulative effects of a series of techniques in a single system, and the art of practical measurement of the multiple effects of a set of techniques.
7. It will usually pay off to discover weaknesses in your proposed design technique set at the earliest possible point in time.
8. The art of systems architecture is so complicated that we must be able to analyse the design status, relative to our design goals, from many levels, many conceptual points of view, and at many points in time during development.
9. A theoretical analysis of the attributes of any set of design techniques must be supplemented by the earliest possible practical measurement of reality. Early evolutionary system delivery steps is a generally applicable early measurement method for this purpose.
10. Written, structured, and quantified documentation about infotecture development is desirable.

This is because the design problems are complicated and because several people are usually involved.

These principles may be somewhat condensed, especially for those who have not already spent time reflecting on these subjects.

So in future columns I will comment on each in more detail.

Once this is done, I will give the other, more detailed, infotecture principles which I have identified.

Tom Gilb

DOWNTIME

DP Enemy Number 1!

GAYLER . . . Set on smashing the nearest computer.

LAST week (CW, April 1) we revealed how a sudden surge of membership in a neo-Luddite society called SOT, or Stop the Onslaught of Technology, threatens the very bedrock of our beloved computer industry.

Now I can show you a picture of the villain of the piece, the man responsible for setting up this society.

Bob Gayler is his name. A return to the dark ages his aim. All I can say is that I would not care to be the VDU screen on the receiving end of that great mallet.

P.S.: If you want to join SOT, Gayler is to be found at a South coast polytechnic somewhere between Hastings and Hayling Island.

Does this man need a rest?

Well-deserved honour

CONGRATULATIONS to Howard Stilwell, chauffeur to ICL managing director Robb Wilmot, on winning a British Empire Medal for services to industry. Never can a medal be more richly deserved. Though working for tireless Robb, with his legendary 100-hour working week, I would have thought Howard needed a holiday more than a medal.

The friendly system

HERTFORDSHIRE Police have been instructed not to use their two-way radios in proximity to computer-controlled cash dispensers sited outside most of the major banks.

Apparently some ethereal gremlin manifests itself whenever PC49 calls in to tell his chums to put the kettle on. Any hapless member of the public who has the misfortune to be using one of the mechanised money boxes runs the risk of having the magnetic coding on his cash-O-mat card further encrypted, rendering it useless.

I wonder how long it will be before some enterprising gang of criminals realises that, even if the boys in blue spot them rushing bemasked and beweaponed from the premises, the presence of the bandit-friendly computer in the wall will prevent any radio-borne call for help reaching the cavalry?

Teacher needs a lesson

THE government loves spending money on microcomputers for schools, said Information Technology Minister Kenneth Baker when announcing the prize-winners in a schools' competition.

Surely not an attitude likely to arouse hostility.

But to be sure it did. Of the £5 million government scheme to put a computer into every primary school in the country, Peter Dawson, leader of the Professional Association of Teachers, said: "I do wish the government would test teacher opinion before rushing into schemes likes this.

"Britain's schools are already littered with colour television sets, language laboratories, and similar software which is unnecessary and grossly misused."

Dawson clearly needs a lesson in computer jargon, or he will find himself quoted in our 1984 column.

Can you beat it?

READERS have warmed to my challenge to find long strings of nouns used as adjectives. Five is the record so far, equalled this week by D. Worsley from Kent who gives us the following extract from a motor cycle magazine:

The mechanic was to release the "CAM CHAIN TENSION ADJUSTER SCREW NUT".

Can you beat the noun-adjective record? First authentic six string noun-adjective past the post wins a free Computer Weekly.

Benefits of technology

WHEN the atom bombs fell on Hiroshima and Nagasaki, Einstein commented: "If I had known my discoveries would lead to this, I would have become a clock-maker."

I wonder if similar sentiments are aroused by news that Ferranti has developed a chip-based fuse for hand grenades. It will confer the benefits of modern technology on a weapon that has remained virtually unchanged since the First World War, Ferranti says.

Had I invented the microchip, I would probably say that I wished I had stuck to fishing.

Chad

FOCUS

Lid taken off pressure

PRESSURE and strain is the theme of the current American best-selling book, The Soul of a Machine, the pressure in this case being that exerted on a bunch of engineers who set about designing their own 32-bit supermini in an incredible super timescale.

Author Tracy Kidder, a journalist specialising in high technology, was an interested spectator in the R & D labs. Had he ventured into an operational DP centre, he would have discovered that, among the souls involved, similar levels of pressure exist.

Except possibly for the sales team towards the end of their sales quota period, DP operations involve more tension, stress and strain than all other areas of the industry.

Delaying the production of a new machine by a month or so is not exactly a vital matter for the sales marketplace. Delaying the introduction could even assist current sales.

Few DP managers are keen to be first in the innovative buying queue, preferring to leave such enterprises to the banks and government industries which are well blessed with resources and non-stressful timescales.

Having read the book, DP management will be even less keen to pioneer the data trail in view of the haste and rush apparently involved in producing new developments.

However, in the operations room one-day production delays would be a matter for much headbanging. If the delay is extended, then head-rolling will be introduced. And first in the head-rolling stakes will be the head of DP operations which probably accounts for his close monitoring of the DP job vacancy market.

Unlike the design engineer, DP management cannot solve current or pressing problems by hiring skilled recruits from the opposition. Installation personnel resources consist of the team itself, which has to respond to temporary excess workloads or production increases, with a minimum of bribery or inducements. Hiring and firing policies in the DP room are not a practical alternative for meeting the challenge of work demand.

Adapting the work-style of the design management team would result in a walk-out by members of the installation team.

Just about the only similarity between the research engineer and DP staff is that of dedication. But while the engineers' dedication lasts for a limited period, DP personnel have to keep up the high pressure work-style until and beyond further notice.

Having read the Soul book, many DP professionals, provided they can master the heavy language involved, may settle for a research role. Being shut away for a month or so at a time away from everyday installation care and stresses would be a welcome relief from meeting user demands, meeting senior management, and meeting head-on the ever-increasing responsibilities of installation schedules.

A recent industry survey of stress levels suggested that FM engineers would be at the low end and DP management at the top of the lists. Stress reduction measures include those of deep breathing exercise, listening to music and playing with home computers.

Deep breathing, it would seem, is about the only practical response in the computer room. The only other practical measure for reducing stress and strain is, apparently, increasing levels of oxygen.

Maybe the souls and hearts of DP personnel in the future can be reached by the introduction of stress oxygen into the air conditioning system when the operational going gets rough.

Alan Simpson

ComputerWeekly

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS

Thursday, April 8, 1982

IBM – lesson in upgrading

THERE is good news and bad news in IBM's additions to its 308X family (the H series). The good news is that the 3083 models provide a gradual upgrade path to the top performance that to migrate from the 3033 to the 308X means using three operating systems.

The announcement of the 3083 makes it clear that the first machine in the H series, the 3081D launched in November 1980, was more of a strategic move than an actual product.

At the time it was felt that the 3081D was not a true H series machine, but rather a degraded version of one. That was confirmed with the launch of the 3081K, with a 40% improvement in performance, in November 1981. It was underlined by the launch of the 3083 series last week, for those new machines can be field upgraded to a 3081K but not to a D.

So where does this leave the 3081D user? Well, just as all roads lead to Rome, all upgrade paths lead to the 3081K, which is for the time being the most powerful machine IBM offers.

But for the old machine user still considering where to go next, it leaves a very clear direction. Avoid the 3081D.

An examination of the price/performance curve for the new 3083 machines illustrates why. The largest one offers only marginally fewer bangs for similarly marginal fewer bucks than the 3081D – the actual numbers are about two million instructions per second less for a $750,000 price cut. Yet it upgrades smoothly to the largest of IBM's systems, the 3081K.

The real significance of the 3083 is that users of a small 303X or a large 370 series processor need not now jump to the 10-mips 3081D unless they actually need that level of performance now.

The other important thing about the 3083 announcements is that IBM has at last acknowledged that 303X users wishing to run existing software on the new processors – and to take advantage of the improvements made in Extended Architecture – will need three operating systems. They must have MVS/370 for existing software, MVS/XA as the true operating system for the 308X range, and VM/XA so that the other two can be supported on the same machine – and that is really going to cost.

What IBM now has to do is sort out the tangle of operating systems to reduce machine overheads and cut that cost.

Has ICL changed?

IN the past, ICL's overtures of friendship have been treated with the same suspicion as the spider's invitation to the fly.

"What's in it for us?" has been the first question to spring to the lips of dealers and traders in response to the company's Trader Point scheme, set up to encourage independent distribution channels.

The answer, according to ICL managing director Robb Wilmot, is mutual benefit. Dealers will be fired with enthusiasm by the new Trailer Point scheme, which gives them wider profit margins the more they sell, and buyers will be lured by ICL's complete and integrated range of "solutions" (or products, as they used to be called). The result: more systems sold, which is lovely for everyone.

So what will ICL have to offer which will lead buyers into its parlour rather than anyone else's? A complete range, says Wilmot: Perq, the DRS distributed system, the System 25, and at the top the ME29.

He has already committed himself to cutting prices, and then cutting again. If he can do that, if he can reverse history and fire up his third party dealers and distributors, and if he can ensure the software support from those outside software houses is up to scratch, then ICL can come up with substantial profits from that range.

It will take nerve for the newly converted company to manage that.

1984 and all that . . .

THIS week's example of the strange things people say about computers was sent in by Norman Hilton, of High Barnet, Herts, who wins £5.

One reason for American anxiety is the rise of what is called the expert system. This means that the brains and lifelong expertise of many kinds of experts, doctors, geologists, accountants and so forth, can be put into a computer programme and used at any time, anywhere, by the public.

The Standard

LETTERS

Wrong people promoted

I READ with interest the articles on management in the computer industry by Alan Williams (Salesbit, CW, March 18 and 25). I feel the main reason for bad management in the industry has come about because introverted technicians have been forced unwillingly, by a desire for financial progression, into management.

Once in that position, it soon becomes apparent that they really have no desire, or interest, in communicating or in other people's problems. Their only interest lies in protecting their own rear ends. Invariably a new manager of this type has been appointed by an equally incompetent person, who would never concede that a mistake had been made, and the chain is perpetuated to the detriment of the whole department.

When the incompetent manager realises that he can successfully pull the wool over departmental eyes and get away with it, he will move on to new pastures – to the salvation of the present company.

Good managers evolve through a combination of innate ability and experience. No amount of instant courses, buzzwords or pinstripe suits produces the desired result. Managers must make decisions which they may, in retrospect, find to be incorrect and corrective action may have to be taken, but this is far better than an indecisive manager who is afraid to make any decision lest it be wrong.

Managers should be appointed from within a company from people who have potential, and not necessarily long service. Employing from outside can saddle a company with an incompetent whose employer is only too willing to release him with the best possible references. Technicians should be paid a salary which reflects their true worth so that they may keep on doing the job to which they are best suited and not be forced up to their level of incompetence.

R. J. THORNTON
Carshalton, Surrey.

Bottom-up design for Sage

DONALD Michie performed a useful service (Letters, CW, March 25) in setting straight the pricing record vis-à-vis Sage (an SPL expert system) and AL/X (the ITL expert system). Other confusions in the press recently (not *Computer Weekly*) have included the report that Sage was applied to oilrig problems, in fact an experimental AL/X application begun several years ago. Sage will be available in May, 1982.

I also wish to clarify the relation between the AL/X and Sage packages. Both are based on Prospector inferencing methods. But while the AL/X package has served very well as a research tool and introduction to expert systems in the UK, Sage was designed "from the bottom up" for regular non-research use.

Differences include:

a) Expertise modularity (a post-Prospector development, valuable for large-scale systems);
b) Logical consistency checking during use (uniquely);
c) Efficient test facilities;
d) Other language design, and (as observed) arithmetic.

In an area moving so rapidly, it is perhaps inevitable that such confusions arise.

JON YOUNG
Head of Expert Systems Group
SPL
Abingdon.

Flogging a dead horse

A CERTAIN manager, being away from his computer room, received a call from his frustrated supervisor, reporting a mysterious hardware fault.

Closer inspection found the supervisor attempting to load the system via the CPU Load button (perfectly normal practice).

What had been overlooked, and was quickly pointed out, was that the system had recently been upgraded and repositioned (this included a new processor of similar appearance) and that the old processor was still in the computer room. The supervisor's finger was on the load button of this disconnected carcase.

Thank heavens the manager arrived before the engineer did.

Name and address supplied

The Editor welcomes letters commenting on subjects published in Computer Weekly, or on original topics. All letters must be accompanied by the writer's name and address, not necessarily for publication. Letters may be cut.

Nominally truncated . . .

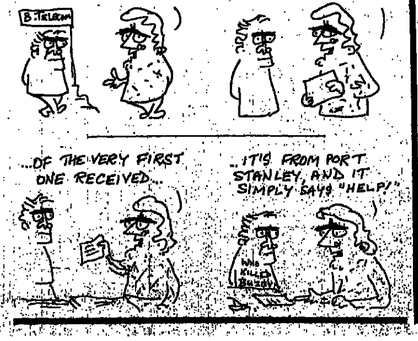
I WAS amused by Chad's story No Respecter of Titles (CW, March 25).

Perhaps an even more glaring and widespread injustice is that done to those of us with more than two forenames. All my computer-addressed mail restricts me to one or two initials.

American arrogance?

R. W. J. WILSON
Cirencester, Glos.

Liveware File by Don



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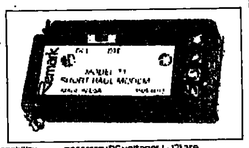

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OP SPOT — by Andrew Thomas

Operators who play real-life space invaders

I'M sure most of you have at some time operated a reasonably sophisticated computer graphics unit, and probably enjoyed the experience. I refer, of course, to the ubiquitous space invader machine. The pleasure of wreaking terrible destruction on invading aliens is only tempered by the expense as you cram in large amounts of loose change in the public bar of the Dog and Bucket.

But there are operators who have the dubious privilege of firing real missiles at real hostile craft, without the inconvenience of having to put 10p pieces into the slot.

The Admiralty Surface Weapons Establishment (ASWE) at Portsmouth, in conjunction with Software Sciences (part of the erstwhile BOC computer services division, and now part of Thorn-EMI), has been working on the future command and control (C2) systems for the Royal Navy since 1978, and has now come up with what it is confident is a major step forward in both increased performance and resilience.

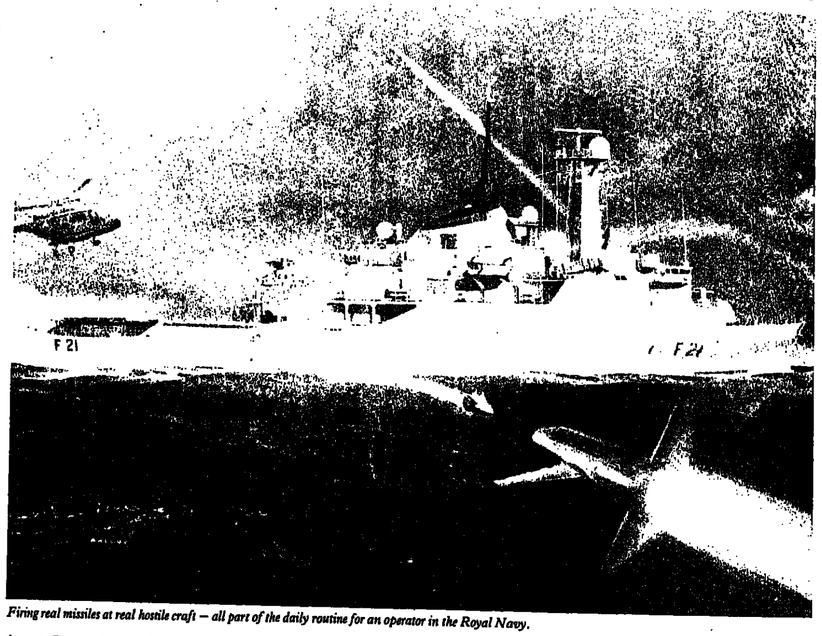
Conventional C2 systems are based around a central computer. This is not only vulnerable in the case of enemy attack, or mechanical failure; the demands placed on the machine during an attack can often cause severe overloads.

The reasons behind the single machine approach are simple: at the time the systems were designed, processing power was expensive, and was available only in relatively large boxes. Thus the possible locations for such a device on board a warship, where space is at a premium, are strictly limited.

Such a system is known as an action information organisation, and all information from sensors such as radar and sonar, and weapon system control (much of which is in analogue format) is co-ordinated from the central operations room, which contains most of the processing power of the fighting unit.

But now that smaller, cheaper and more powerful computers are available, the opportunity has arisen for the Navy to provide a more comprehensive and resilient system, incorporating hardware and software innovations, networking and database techniques.

The solution produced by ASWE and SSL is known as distributed information architecture for ships (DIAS), and is based around the military version of the Ferranti Argus 700 mini, the Argus M700/20, which, although supposedly identical from the user viewpoint, has a different instruction set. Other differences include a compact housing and a more rugged construction.



Firing real missiles at real hostile craft – all part of the daily routine for an operator in the Royal Navy.

The test configuration at Portsmouth incorporates six commercial Argus machines, and five of the militarised versions, linked through individual intelligent communications links to two parallel data highways operating at 1.5 megabits a second.

In a live installation on board a warship, data from the various types of radar, sonar and navigation aids would be digitised and placed on the data highways. The communications links would then decide which machines should receive the information.

Thus an aircraft appearing on radar would be routed to the screens in the operations room, where it would appear with a track and velocity, but not to the computers dealing with the database management functions of the network controllers.

Each key element of the system, such as the network controllers, is replicated. The back-up machine constantly monitors its live counterpart and, should it fail, will take over as the prime machine. The live machine also keeps an eye on its deputy, and in the event of any failure, the operators are notified so that the requisite maintenance can be initiated.

Following the failure of a prime device, the deputy taking over its functions will set up another node of the system as its own deputy, thus maintaining the integrity of the system. Duplication of the data highways (in a live system there would probably be three) enables the actual cables to run through different parts of the ship.

So, should the vessel be disabled by enemy action, it is unlikely that all the highways, or sufficient computers would be put out of action to bring the DIAS network to a halt, so the ship could fight on.

In the operations room, the operators co-ordinate the sensors, navigation and weapons systems of their own ship, and via radio links, can either control, or be a part of, a larger force of ships and aircraft, forming a more effective fighting unit.

With the addition of communications, DIAS becomes a C3 system, capable of providing data on the disposition of all the elements of the force, enabling the commanding officer to make fast and accurate tactical decisions.

This is the principal benefit offered by DIAS – the provision of substantially more management information, without reducing the support offered to the more junior members of the ops room team.

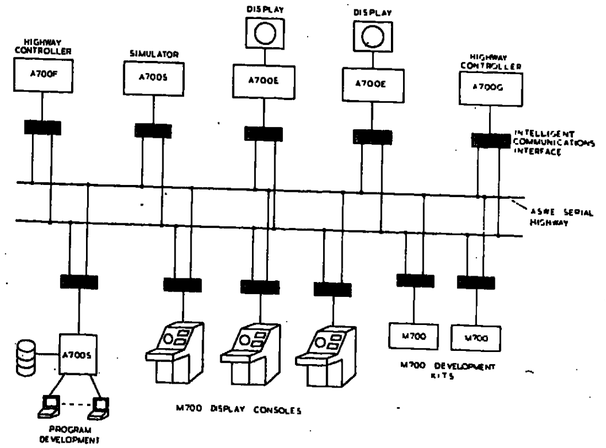
Some of the more routine tasks currently performed are being automated, allowing them to concentrate more fully on the intuitive and supervisory tasks which are as yet beyond the scope of computers.

DIAS is not merely concerned with the actual operation of the ship in which it is installed. It also replaces many of the printed manuals normally carried, and can supply stored intelligence information on demand.

As weapon and sensor systems continue to make more extensive use of in-built intelligence, the sheer bulk of data available to the ops room is rapidly outstripping the capability of a single machine of a size suitable for ship-board installation.

Distributed processing provides ample power – if more is needed, simply add another node to the network – and has the benefit of making the ship a more effective and resilient fighting unit.

The first DIAS systems are expected to be installed in the Navy's type 23 frigates in 1986 and, it is anticipated, will provide computer power to the Senior Service into the next century.



Schematic diagram of the DIAS network.

Long and short of it

MY Scottish correspondent, Hamish McProcessor (name changed to protect the innocent), has written to me concerning the inefficiencies inherent in some of our larger companies. He includes as evidence a telex which uses 18 inches of paper for a large number of addresses, followed by a one-inch message.

Attached to this was another missive, complaining of the number of "insufficiently addressed" telexes floating round the organisation.

If you have any examples of bureaucratic boobs of this nature, I should be grateful to receive them, along with suggestions for the improvement of the situation.

We all know that operators are the most practical employees in the industry, so let's show the rest what we can do.

Come on, I know some of you can write.

First in a field of one?

GREAT news this week. After months of speculation, a genuine DP manager from an operations background has finally been spotted. Andy Wight is DPM of Cedric Chivers, in Bath. He runs an NCR Century, and has a staff of five.

"We used to have seven, but that changed shortly after I took over," says Wight. Sounds like a dangerous man.

"I went along to the BCS once," he continued, "but they tend to look down their noses at DPMs without degrees."

Wight says that operations is the best place to start in computing. "You get a total top-to-bottom view of what is going on."

So far, Wight is the only operations-grounded DPM to have contacted me. Could it be that he is No 1 in a field of one?

"Could be," he ventured.

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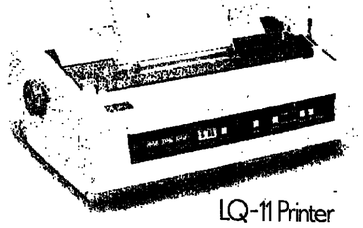

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PLESSEY PERIPHERAL SYSTEMS

PROGRAMMERS PAGE — by Philip Hunter

PEARCE . . . "I enjoy being in such a new area."

The programmer who is breaking-in Ada

WERE I to describe Sara Pearce, who works for CAP Reading, as the world's first Ada programmer, it would be a distortion of the truth. But she is certainly the first purpose-built applications Ada Programmer I know of.

Until recently, the US military language Ada has been kept under the wraps of its makers.

Pearce, 22, joined CAP fresh from Swansea University in September and took the hard way to wisdom with Ada – from a reference manual. But she was able to practise the principles on a workstation dedicated to Ada and Pascal after a couple of months, and now flexes an enviable fluency.

The workstation sits on a desk and contains just a partial implementation of Ada. CAP is marketing this, and it is Pearce's job to develop programs that demonstrate various features of the language for presentations.

These include a small robot arm control system, and an airline reservation system.

One of Ada's strongest features is its multi-tasking facility, which allows several processes to go on at once with exchange of information between them when necessary.

The airline booking system demonstrates this par excellence – the bookings can be fed in while updates are performed.

The robot can be manipulated directly from the keyboard and at the same time the system can memorise the sequence of movements. So here again the multi-tasking facilities of Ada are exploited in a "teach and learn" capacity of fundamental importance to process control applications. The robot is driven by stepper motors, which respond to impulses and produce a predictable movement to each Ascii character when it is fed down the line to the control logic. By this means the robot is programmed, and the speed at which the characters are passed determines the speed of movement of the robot's limbs.

At present, CAP's robot cannot perform accelerated or decelerated movements, neither is it capable of the maximum speeds, which would be generated by character transfer rates of 960 a second.

Without a steady acceleration, the attainment of maximum speeds is a jolt and can result in slipping between the motors and the robot arms, explains Mike Pickett, to whom Pearce reports.

CAP is using Pearce as a barometer to measure the pressure of writing in Ada, which is largely untried on the coding bench. But she does not seem to mind being a guinea pig.

At university, she learnt some Portran and Pascal and now says she prefers Ada to either of them.

"I enjoy being in such a new area," she says.

How to tackle text input recognition

ONE of the most immediate and practical applications of artificial intelligence is the computer recognition of text input from a keyboard. With online access reaching more and more of the people condescendingly called naive users, it becomes vital to develop simple query languages and means of selecting options.

The first issue of a new academic journal, Behaviour and Information Technology, contains a paper by Martin Maguire of Leicester University which addresses this problem. He begins by arguing that mere menu selection is too narrow a channel of communication and that textual input should be considered.

He cites four main types of problem in matching text inputs with a computer dictionary:

- Inability to cope with spelling mistakes.
- Difficulty in coping with abbreviations, alternative spellings and word orders.
- Computer responses which lack sense.
- Lack of helpful diagnostics or prompts when there is an error or input is not recognised.

Maguire goes on to describe a method called TEX, which is an attempt to tackle these four input recognition problems.

TEX begins by splitting input into individual words and looks them up in a dictionary. Minimal abbreviations, usually three characters, are allowed, and designed to ensure little chance of ambiguity.

While the matching takes place, a record is kept of words that almost match the word input. If no exact match is found, then near matches are displayed on the screen for the user to take his choice.

For full details, I refer you to the excellent paper.

Maguire concludes succinctly: Don't go overboard in search of the perfect system. Allow for a small percentage of interaction between user and computer, but keep the problem as simple as possible. Amen.

A PUPIL from one of the special school prize-winners meets Information Technology Minister Kenneth Baker.

Program that captured the imagination of a disabled schoolgirl

A RECORD entry of 597 in the Department of Industry's second Schools' Computer Competition included 40 in a new category of special schools for handicapped children.

Ten of the schools were singled out for high honour at the prize presentation by Information Technology Minister Kenneth Baker at Admiralty House. Five of these were secondary schools and received star prizes of Research Machines 380Zs with peripheral graphics, colour and printing equipment.

The other five were schools for the handicapped and received special prizes of systems tailored to their needs.

The object of the competition was to describe how a microcomputer might benefit the school. Entries did not have to be working systems, although many were.

One of the able-bodied star prize-winning schools showed how a computer could be used with local disabled groups. This was St Stephens High School from Port Glasgow, with a written report based on liaison with Lilybank School, a nearby education centre for the severely handicapped.

The pupils took a microcomputer to Lilybank and developed applications including a "Sink the battleship" program, colour matching, figure recognition, and what was described as a clothing quiz, in which a pupil is given a subject such as "fireman", and selects appropriate items of clothing to complete the uniform.

One of the pupils told me how a severely handicapped girl of 15 who had apparently shown little interest in anything before suddenly took to the battleship program – a sparkling example of the general appeal of real time programming.

One of the more technical projects, also a star prize-winner, was a computerised trout farm from Tabor High School in Braintree, Essex. A system based on the Research Machines 380Z, common in schools, was used to operate an oxygen pump, heater, cooler, water tap and draining pump from readings taken of temperature, oxygen content and water level.

Also important is that trout excrete ammonia, which is poisonous to them. Hence they naturally flourish in fast-flowing treams which maintain water of pristine purity. In the pond a bed of gravel impregnated with bacteria which break down the ammonia into nitrates, is used to filter the water. It was not deemed possible to control interactively the ammonia level, but the computer was used to monitor it.

If the level rises too high, a telephone alarm is triggered. This action is also taken when someone tries his hand at a little poaching – there is a burglar alarm in the pond.

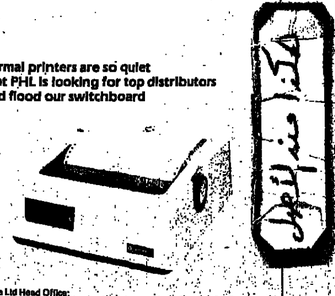
The pupils were not slow to miss a fertile corollary of their work. The nitrates produced when bacteria break down the waste ammonia encourage plant growth. So the gravel beds containing these bacteria could be placed in a greenhouse away from the trout farm.

Water from the farm is then piped into the greenhouse and flushed through the gravel beds to remove the pernicious ammonia and leave a residue of benevolent nitrates for the plants. The computer comes in by monitoring the temperature of the greenhouse, the chemical composition of the water and the response of different plants to this regime.

- A microcomputer software competition for primary and secondary schools with prizes totalling £1,750 has been announced by Transam Computers and Hutchinson Education. Closing date is July 1, and full details are available from Prime Programs, 17 Conway Street, London W1P 6JD.

KEEP IT QUIET!

The SHINKO thermal printers are so quiet that the merest whisper that PHL is looking for top distributors and OEM's could flood our switchboard



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Triumph over the system

CHESS computers have yet to conquer master players, but the strongest ones can curtly dismiss mere humans.

The battleground lies in the domain of the club player, so it was with interest that I followed the progress of the recent Silica Computer Chess Symposium, held at Imperial College, London.

Here players described by Times chess correspondent Harry Golombek as being of "rather more than average club strength", competed against three leading machines: Sci-Sys Mark V, Voice Sensory Challenger Champion and the Great Game Machine.

Result: A clean sweep for the humans. There were two teams each of which played eight games against each of the three machines.

The Great Game Machine did best, scoring an honourable 4½-3½ defeat against a team from Berkshire. The other team, from the Central London YMCA Chess Club, put down Great Game Machine Machine 5½-2½ and thrashed each of the other machines 6-2.

The results were not so humiliating as they sound for the computer community since the three machines were all micros. "The best mainframes in the world are almost up to master standard and would have fared better," says David Levy, who is arguably the world's leading authority on computer chess.

There is still quite a difference in standard between the best microcomputer chess programs and those of the big mainframes. Nevertheless a program on the Osborne microcomputer managed to come fifth in a recent competition for chess machines in Los Angeles.

PUZZLER

THIS week's point-location problem is one of the most difficult of its kind, since no symmetrical solution exists.

The task is: Set out 11 discs on a flat surface so that 10 straight lines of three are formed. See page 31 if baffled.

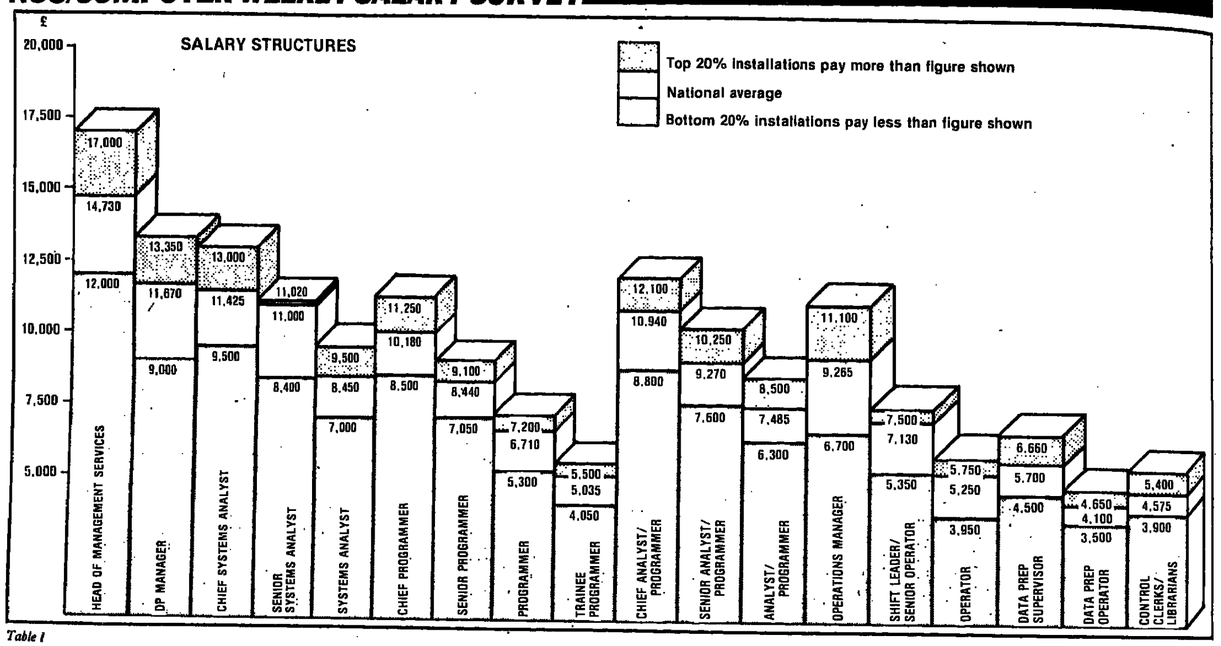


Table 1

Increasing DP staff shortage is likely to force up wages

SHORTAGES of computer staff across the whole range of skills are likely to get increasingly severe over the next five years. And with most installations running at up to 11% short on their establishment at the end of last year, this is likely to put upwards pressure on salaries, increasing use of contract staff, and more spending on recruitment.

These are the conclusions which can be drawn from a major survey* of 1,000 large computer installations across the country carried out in the last quarter of 1981 by the National Computing Centre and published exclusively in Computer Weekly.

The survey shows that staff levels increased during 1981 in DP manager, programmer and systems analysts categories, while they fell in data preparation. Operator employment remained unchanged. But the predicted change over the next five years calls for 22% more analyst/programmers and 20% more programmers during that time.

The NCC/Computer Weekly survey also shows that salary rises in this year's pay round are likely to be about 7½%, after averaging 9½% last year.

More than 1,000 major computer installations were selected at random from the NCC's National Computer Index. All had a minimum main system value of £25,000. The index contains details of 8,500 installations throughout the UK.

Using data available from the index it was possible to apply weighting factors to the survey replies (400 usable questionnaires were returned) to make the survey results reflect the actual conditions found in the UK computer population. A statistical analysis was done by Manchester University.

The survey covered three basic areas — staffing, salaries and holidays and perks.

Data was collected for the 18 most commonly-used job categories, with further subdivisions covering such items as: geographical region; type of industry; total number of operations, development, and systems staff; and the types of perks offered to employees.

London and the South-east account for 45% of the UK's computer installations and nearly 50% of all computing jobs. Greater London itself encompasses 30% of all programming and systems analysis posts.

Not surprisingly, there are more jobs for data preparation staff and operators (47% of all DP staff) than senior management (5%). Programmers account for 20% of the market, analysts 13%, with analyst/programmers bringing up the rear with 9%.

But there is a firm trend towards more staff in the management and development areas. In 1980, these categories accounted for 45% of computer posts, but by the end of 1981, this figure had risen to 48%. By 1986, the survey predicts, it will increase to 53%.

Despite nationwide unemployment and a depressed economy, computer departments are consistently under-staffed to the extent of 5% of headcount. Although partly attributable to a reluctance to recruit new staff in a time of recession, this also reflects a difficulty in the recruitment of suitably experienced and qualified staff.

Table 7 illustrates this. As an example, there are now 9% more programmers employed than was the case 12 months ago yet 8% of programming vacancies are unfilled.

With a projected 20% increase in the requirement for programmers over the next five years, and a meagre 30% of companies employing trainee programmers, the question is posed: where will they come from?

Salaries form one of the most significant aspects of data processing budgets — in just over half of departments, over 40% of the total DP expenditure was accounted for by personnel costs. Only a fifth had 25% or less of their costs directly or indirectly attributable to personnel.

Table 1 shows average salaries at the end of 1981 for the 18 major categories of UK computer staff, and the salary band covering 60% of the installations surveyed. As an example the average salary paid to DP managers is £11,670, but 20% were paid less than £9,000, and the remaining 20% received more than £13,350.

The variations are due to many factors, including size of installation, number of staff employed, and geographical location. Table 6 shows those respondents whose returns showed significant deviation (±5%) from the national average for the 14 job categories covering the great majority of all employees, by region, type of industry and total DP staff employed.

It can be seen that London salaries are considerably higher for all job types, and that larger departments tend to pay better, except for data prep staff. It is also significant that in no category are employees in the public sector substantially poorer than the national average, and in the case of the more senior posts and operations staff they are consistently higher-paid.

Overall, the most poorly-paid industry groups are the engineering, business and financial services areas. DP managers and operations managers show the greatest salary range, and development staff the smallest.

The salary trends for 1981 reflect what actually happened, and show a roughly average 9½% rise.

Estimates for the rise this year may well have been depressed by the response to public sector pay guidelines, resulting in Table 4 showing a remarkable proclivity towards increases close to 7%. But in general, all types of employer expect to award smaller increases than last year.

On holiday entitlement, all job categories fell within the four or five week area, with the senior staff having more time off, as might be expected. Again, larger installations scored higher in the holidays league.

One of the most significant aspects of remuneration packages is perks. Ranging from company cars to subsidised meals, they provided an extra 10% across all job categories. The actual value of perks shown in Table 5 was estimated by the respondents themselves as there is no other sensible method of accumulating this data.

It is noticeable that the generally better pay in the public sector is partly counter-balanced by significantly less advantage from perks.

The overall value of perks to a DP manager in the public sector is £500 on top of a £12,545 salary, while his or her counterpart in the engineering industry can expect £1,670 in addition to a basic wage of £10,505.

This illustrates the importance of perks in augmenting salaries. While the public sector DP manager appears to receive 7½% more than the national average, with perks taken into account, the gross salary falls to 1½% below the average.

In the engineering industry, DP managers are typically 16% below the public sector, but when perks are taken into consideration, the shortfall reduces to only 7%. As a national average, DP managers' perks add 14% to the value of their salaries.

*Salaries and Fringe Benefits in Computing, 1980-81, to be published May 1, price £50. National Computing Centre, Oxford Road, Manchester M1 7ED.

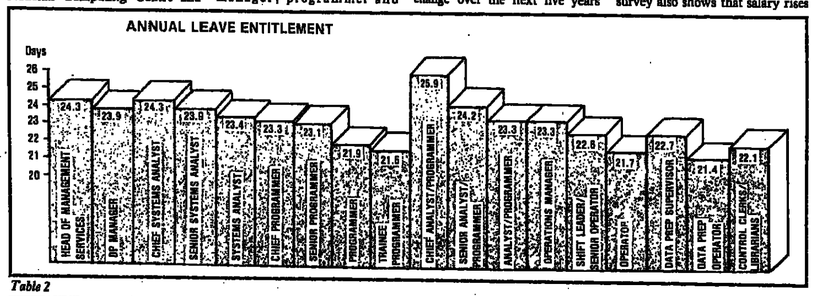


Table 2

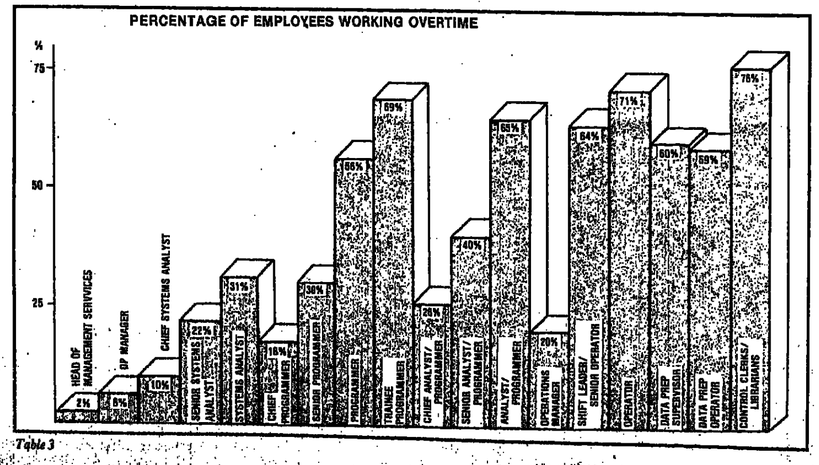
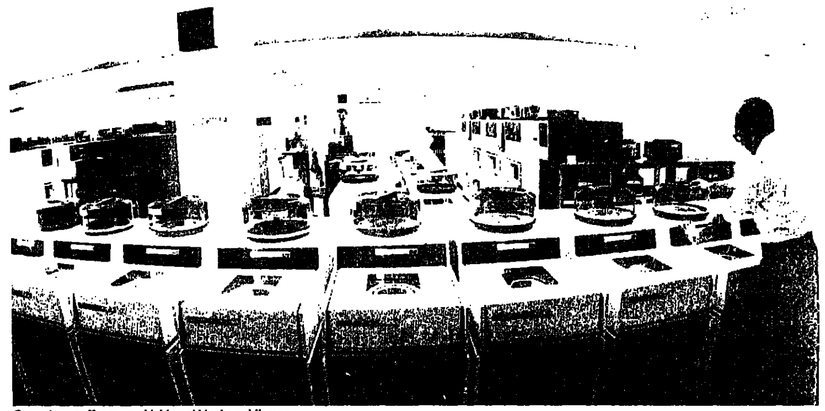


Table 3

Computer departments were found to be consistently understaffed

'Most sites are understaffed by up to 11%'



Operations staff are more highly paid in the public sector.

MAJOR PERKS : % OF EMPLOYEES RECEIVING DIFFERENT BENEFITS

	Car	Health/Life Insurance	Subsidised Meals	Annual Bonus	Value of perks as % of Salary
Head of Management Services	59%	49%	49%	28%	18%
DP Manager	49%	44%	39%	20%	14%
Chief Systems Analyst	22%	36%	46%	14%	11%
Senior Systems Analyst	14%	27%	52%	12%	9%
Systems Analyst	1%	38%	47%	4%	10%
Chief Programmer	7%	34%	52%	17%	13%
Senior Programmer	2%	28%	47%	9%	7%
Programmer	1%	30%	50%	11%	8%
Trainee Programmer	0%	22%	43%	6%	10%
Chief Analyst/Programmer	9%	32%	37%	11%	*
Senior Analyst/Programmer	0%	18%	26%	10%	10%
Analyst/Programmer	0%	19%	32%	8%	8%
Operations Manager	9%	33%	44%	17%	10%
Shift Leader/Senior Operator	0%	29%	47%	11%	11%
Operator	1%	26%	40%	10%	10%
Data Prep Supervisor	0%	20%	33%	12%	7%
Data Prep Operator	0%	16%	31%	9%	7%
Control Clerk/Librarian	0%	16%	33%	8%	8%

* insufficient data

Table 5

NATIONAL SALARY TRENDS

Percentage pay rise	Actual 1981	Predicted 1982
Head of Management Services	10.2	7.8
DP Manager	9.9	7.8
Chief Systems Analyst	10.0	7.7
Senior Systems Analyst	8.8	7.0
Systems Analyst	9.2	7.2
Chief Programmer	9.7	7.3
Senior Programmer	9.4	6.8
Programmer	9.3	8.2
Trainee Programmer	9.7	7.3
Chief Analyst/Programmer	11.0	9.2
Senior Analyst/Programmer	8.9	7.4
Analyst/Programmer	9.7	8.0
Operations Manager	9.5	7.2
Shift Leader/Senior Operator	10.4	7.5
Operator	9.5	7.2
Data Prep Supervisor	9.3	7.4
Data Prep Operators	8.4	7.1
Control Clerks/Librarians	9.0	7.5

Table 4

EMPLOYMENT TRENDS

	Number Employed per 1,000 Sites	Dec. '81 shortage as % of number employed	% change 1980 to 1981	% change predicted for next 5 years
Head of Management Services	333	1.4%	+5.5%	0
DP Manager	784			
Chief Systems Analyst	433	6.4%	+5.6%	+13%
Senior Systems Analyst	992			
Systems Analyst	1437			
Chief Programmer	273	8.2%	+8.8%	+20%
Senior Programmer	908			
Programmer	2314			
Trainee Programmer	877			
Chief Analyst Programmer	132	11.3%	+3.7%	+22%
Senior Analyst Programmer	540			
Analyst Programmer	1383			
Shift Leader/Senior Operator	1448	3.0%	0.0%	+5%
Operator	2724			
Data Prep Supervisor	711	2.4%	−2.3%	−8%
Data Prep Operator	4947			
All employees	22144	4.9%	+2.7%	+7%

Table 7

TYPES OF COMPUTER DEPARTMENTS SHOWING SIGNIFICANT (5%) DEVIATION FROM NATIONAL MEAN SALARY (See below for details of codes used)

Job Category	5% or more above average: region	industry	staff size	5% or more below average: region	industry	staff size
DP Manager	1	9	-4,5	4,5	3	1,2
Senior Systems Analyst	1	1,9	–	3,5	3,8	1,2,3
Systems Analyst	1,4	1,9	–	2,3,5	8	1,3
Senior Programmer	1,6	1,9	–	3	3,8	2,3
Programmer	1	1	–	3	3,8	1,2
Trainee Programmer	1	2	–	2,5,6	8	1,2,3
Senior Analyst Programmer	1	1	–	5,6	3	1,2,3
Analyst/Programmer	1	1	5	4,5	2	1,3
Operations Manager	1	9	4,5	3	2,3,8	1,2,3
Shift Leader/Senior Operator	1,6	1,9	5	3,5	3,8	1,2,3,4
Operator	1	9	5	3,5	3,8	1,2,3
Data Prep Supervisor	1	2	–	3,5	3	1,2,3
Data Prep Staff	1	–	4,5	3,5	3	1,2,3
Control Clerks/Librarians	1,4	2	–	2	–	1
				2,6	1	1,2

REGION	CODE
London	1
South	2
North	3
Midland	4
Wales & West	5
Scotland & NI	6

INDUSTRY GROUP	CODE
Public Sector & Professional/Scientific Services	9
Insurance, Banking, Finance & Business Services	8
Engineering	3
Other Manufacture	2
Other	1

STAFF SIZE (Computer Dept.)	CODE
1-5 Employees	1
6-10 Employees	2
11-20 Employees	3
21-35 Employees	4
Over 36 Employees	5

Table 6

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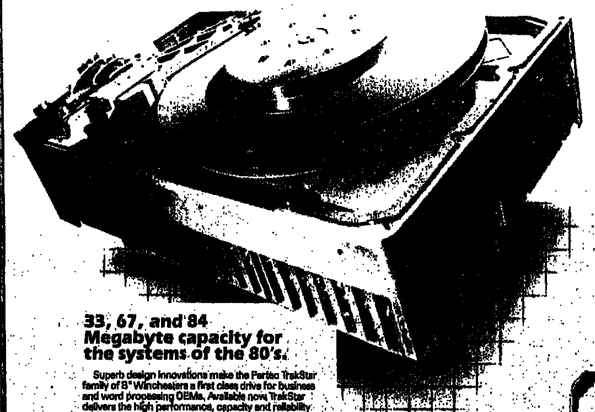

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PEOPLE

SPL International appoints six bosses

Lamb *Rodway* *Shaw* *Wilson*

SYSTEMS and software company SPL International has made six top appointments across several divisions, naming five managing directors and a director of communications.

Peter Ingrams is managing director of the information systems division. He has been with the company for seven years, latterly as director of operations in the UK systems group. Before that, he was with Scicon, which he joined in 1966 as systems analyst. In 1971 he was appointed manager of a project to codify and revise the law of Iran in Tehran. Until his appointment with SPL he was resident consultant at Scicon's Singapore offices.

David Lamb has been named managing director of the command and control division. He joins the company from Leasco Software, where his projects included command and control systems for the police, intelligence and message switching systems for the Ministry of Defence and consultancy/design work for advanced systems users.

Managing director of UK operations is **David Rodway** who, in 1963 with three others, founded SPL. His role within the company has largely been that of technical director responsible for the development of the company's technical standards and methods and for project management and quality assurance. He set up SPL's Abingdon-based Research Centre in 1977, and was its managing director until his recent appointment.

Jim Fisher takes over as managing director of the Research Centre. He has been with the company since 1969, when he joined as managing director of its medical services division. He was appointed director of special markets in 1973 and was director of the products group immediately before his latest appointment.

Ray Shaw becomes managing director of SPL's industrial division. He was previously services group manager of ICI plastics division's engineering department. He was responsible for the design of the plastics division's first computer controlled plant and recent responsibilities have been in the division's control engineering development facility. He has written papers on control and instrumentation and lectures on the effects of computer technology.

Director of SPL's communications and office automation division is **Don Wilson**. He joined the company in 1972 and has over 20 years' experience in consultancy, hardware and software. For the past three years he has been a member of the council of the UK Computing Services Association, CSA, and is chairman of the CSA Systems and Software Business Industries Group. He is currently president of the Tandem User Group in Europe and is a member of the Institution of Production Engineers Robotics Working Party.

Nokia names chief

NOKIA UK, the British subsidiary of Finnish firm Nokia Oy launched in 1980, has named Peter Cox as managing director.

Cox joins the company after 10 years with Philips, where he started as a senior salesman for South Wales. During his time as Midlands sales manager for the company he received the Golden Guilder Award for three consecutive years.

In 1979, he transferred to the head office as sales support manager, and on the formation of Philips Business Systems became general manager for the Southern group. In 1981 he was appointed general manager of small business computers. Prior to joining Nokia, he was business development manager for small business computers within the DP division.

Early posts were held with Plessey, NCR and Kienzle. Cox aims to establish Nokia in the business systems and data products markets, to be backed up by a marketing and advertising campaign throughout this year, and the appointment of dealer networks.

Manager for Harris PABX

Harrison

FOLLOWING its selection as a potential supplier of PABX equipment in the UK, Harris Corp is to establish a digital telephone systems division in Slough, Berks, and **Stuart Harrison** has been named UK manager.

Harrison will liaise with British Telecom and will recruit sales, engineering support and production engineering staff for the division. He will also plan manufacturing facilities for the Harris D1200 range of PABX systems.

He has been with the company since 1979, serving most recently as marketing manager for the company's DLS range of PABX systems in the US. Before joining Harris, he was telephone switch marketing manager with GEC.

Harrison has a degree in electronic engineering from Lancheater Polytechnic in Coventry, and an MBA from the University of British Columbia in Vancouver.

Raoul Wynn (second left), commercial director of DRS, with personnel from Data Sciences Nigeria and JAMB.

Professor killed

PROFESSOR Keith Bowden, one of the founder members of Essex University's Department of Computer Science, has been killed in a motor accident.

At the University of Essex, he was a pioneer of the establishment of computer systems in undergraduate computing and led a number of externally funded projects, including the first application of computers to maintain personal medical records in Britain.

Professor Bowden was also chairman of the sub-committee of Project Horizon, a body seeking to encourage the application of technology to improve the quality of life for disabled people.

Nigerian deal for DRS

MILTON Keynes-based DRS Data and Research Services has appointed Data Sciences Nigeria as distributor to provide servicing for DRS' Nigerian customers. The company will market the DRS optical mark reading system range, including printing and bureau facilities.

Since 1979, DRS has processed about 750,000 multiple-choice exam papers each summer on behalf of the Joint Administration and Matriculation Board, JAMB, and the company last year supplied three OMR systems for use by the board in Nigeria so that papers could be processed on site in future.

Veteran retires

PLESSEY veteran Maurice Eley, who has for the past three years been resident Plessey director in Hampshire and Wiltshire, has retired after 44 years with the company.

Eley joined Plessey as a trainee in the Ilford purchasing department in 1938, starting on a salary of 35 shillings a week. He returned to the company after the war in 1946 as an assistant buyer and went on to become buyer.

In 1958 he entered general management. Ten years later he became general manager of the components group, following the firm's withdrawal from the domestic appliance, radio and TV markets, and by 1972 he was managing director of the newly formed electronic components division.

Illness resulted in his retirement from this post in 1979, when to took up resident directorship in Wiltshire and Hampshire. He will continue to act as a consultant to Plessey and is joining the board of Arcotronics Holdings BV.

■ **John Gaplin**, sales manager of Coherent's scientific and industrial laser division for the past two years, has been appointed general manager of the company's Dutch subsidiary.

■ **Geoff Brett** has been appointed sales manager at Brown's Operating Systems Services. He joins the company after two years as a sales executive with Infomatics UK.

■ **Paul Wagstaff** has joined BIS Applied Systems as a training sales consultant to service the Midlands counties. He will be based in Birmingham.

■ **David Streeton** has joined Calma as general manager of its UK operation. He was formerly director of sales at software house Systems Programming.

■ **Peter Thomas** and **Ken Murphy** have been promoted to district managers at Prime. Thomas will manage the company's special industries group. He was formerly manager of the company's corporate accounts branch. Murphy becomes manager of Prime's North and Midlands district. He has been with the company for four years, latterly as Bedford branch manager.

■ **Jim O'Connor** has joined the Butler Cox consultancy as a consultant specialising in information management systems. He was previously with the UK division of ACLI.

■ **Derek Chapman** has been appointed customer services manager and **Mark Coakeley** sales engineer at Pertec International. Chapman was formerly technical support manager at Data Recording Equipment and Coakley, who has been with the company for two years, was previously a senior service engineer.

DIARY

APRIL 13

Social evening – wine and cheese. IDPM West London to Oxford branch. Bull Hotel, Gerrards Cross. 7.30.

APRIL 14

The Tandem Non-Stop computer. BCS North London branch. West Lodge Park Hotel, Cockfosters, Herts. 8.00.

Living with graphics and CAD. BCS Newcastle branch. Ellison Building, Newcastle Polytechnic. 6.00.

Installation visit to Cummins Engines, Darlington. BCS Teesside and District branch. Details Jay Chapman, Middlesbrough 216121.

APRIL 14-15

BCS Database 82 Conference. BCS Database group. Thames Polytechnic, London. Details from Guy Fitzgerald on 01-854 2030, ext 377.

Applicative programming – an emerging technology. Annual open lecture of University of St Andrews, Scotland. Details from Computional Science Dept, John Honey Building, North Haugh, St Andrews, Fife KY16 9SX.

APRIL 15

Machine translation at ITT. BCS Natural Language Translation Specialist group. King's College, Strand, London. 6.00.

APRIL 28

PABX, speaker from Mitel. BCS Data Comms Specialist Group. BCS Headquarters, Mansfield Street, London. 6.00.

MAY 5

Computer privacy? Branch AGM, then debate. IDPM Central London branch. Altergo Software, Imperial House, 15-19 Kingsway, London. 6.30.

Japan the Golden – threat or promise? IDPM Sussex branch. Speaker Kevin Cahill, associate editor, Computer Weekly. British Caledonian Office, Gatwick Airport, Sussex. 7.00.

AGM. BCS Belfast branch. Drumkeen Hotel, Belfast, 8.00.

Presidential address and AGM. Speaker P. D. Hall, BCS president. BCS Manchester branch. NCC, Oxford Road, Manchester. 6.45.

CONFERENCES

■ BETWEEN April 19 and 23, the International Fire Security and Safety Exhibition and Conference will be held at Olympia, London. Seminars in the programme will include a kidnapped industrialist's view on how other potential victims can minimise their vulnerability; the analysis of ten years of the UK Fire Precautions Act; occupational safety and health, and an insight into why skin diseases could become an industrial epidemic. About 600 companies will exhibit products and services in the security and safety field. Details from Victor Green Publications, tel 01-388 7661.

■ PROFIT from Information Technology is the title of the Institute of Management Consultants' 20th anniversary conference to be held at London University's Imperial College on April 21. Keynote speech will be by John Wakeham MP, Parliamentary Under-Secretary of State for Industry. This will be followed by a series of working sessions, during which members of the industry and management consultants will discuss management problems whose solutions were aided by the use of information technology. Topics will include software, computer aided manufacture in engineering, working examples of the electronic office and a user-based approach to DP by non-computer managers. Details from Len Baker on 01-636 2361.

■ THE Human Factors Group of the IEE, and the Word Processing and Office Automation Specialist Group of the BCS are jointly presenting a half-day colloquium to review the experience of word processor users over the past five years. It will be held on May 4 at the IEE headquarters in Savoy Place, London. Speakers are consultant Tony Steigler, Dr. Underwood of ICL and Roger Whitehead of Office Futures. They will discuss some of the problems in their work in this field, and the audience will be invited to feed back their own experiences. Details from Ms D. Kennedy on 01-240 1871.

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MK11-BF Memory	6,075	MS11-MB Memory	3,595
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MXV11-AA	405	MSV11-DA	240
MSV11-DD	695	H9273-A	355
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BOOKS — Selected by Maggie McLening

Penetrating the power game at Data General

The Soul of a New Machine, by Tracy Kidder. Published by Allen Lane, price £7.50.

THE way to learn about something complex is to observe the people involved in it.

This is what Tracy Kidder has done in his staggeringly successful book on what is universally regarded as a dry and complex subject: computer engineering.

Kidder has done something no other author has done before; he has penetrated an innermost sanctum of the second largest minicomputer manufacturer in the world with the express purpose of writing a book on it.

Kidder has been a journalist for ten years and works as a freelance writer for *Atlantic Monthly*. Two year ago his editor told him to look into computers.

The outcome was The Soul of a New Machine, a story which blows a great big hole in the myth that the job of a computer engineer is dull and highly structured – in the case of Data General, that is.

Data General is presented as what organisational theorists would describe as a "power culture", wherein managers ruthlessly compete for resources and whose peers are tolerant of means as long as the job gets done.

The central character is an engineer called Tom West – superstar, genius, Machiavellian prince and family man rolled into one. West motivates by creating crises. His subordinates, fresh-faced graduates, despise him for the way he treats them – never greeting them in the corridor, never patting them on the back for doing a good job, and so on. But they know that their colleagues at IBM would take years to get to work on projects of the same importance. Some drop out but most of them realise they are on to a good thing if they can "get their name on" a new machine which actually makes it out of the factory door.

Impossible deadlines are set to get a machine built, and Kidder vividly describes the political power struggles taking place within Data General between the blue-eyed boys of the official research team assigned to take the company into the 32-bit minicomputer market and Tom West's understaffed and under-resourced research team unobtrusively tucked away in the basement of the company's headquarters "where the action is".

What Kidder has achieved is a story which makes things like microcoding, simulation and debugging interesting and accessible to the layman. "The way I got interested in microcoding is by getting interested in the microcoders," he explained. He is a quiet unassuming character and looks somewhat uneasy about his sudden elevation into the limelight.

The Soul of a New Machine has found a wide readership outside the US in countries like Japan, Germany, Holland and France, and of course in the UK. And film maker Columbia has taken an option on it for one year with the right to renew for another year.

Boris Sedacca

KIDDER . . . vividly describes the power struggles.

Overtaken by events

Electronic Mail Systems – A Practical Evaluation Guide. J. A. Welsh and P. A. Wilson. NCC Publications. 130pp.

FOR readers keen to discover what electronic mail is all about this is not the book. But for those already, or just about to be, involved, it comes in the desirable buy category.

As can be expected of an NCC project team, it establishes standards and procedures involved in EM operations.

The book covers such matters as ergonomic design, documentation, management, security and inevitably, archives.

But the list of EM suppliers suffers the fate of most books covering office technology, that of being out-of-date one hour after compilation. Missing from the NCC chart are such notable EM suppliers as BT, Digital and Hewlett-Packard.

This book is the first in a series of NCC evaluation guides covering office technology in the Eighties. The project certainly looks like being a worthwhile, if exhaustive, enterprise.

Alan Simpson

Good news for UCSD early sufferers

The UCSD Pascal Handbook. Randy Clark and Stephen Koehler. Prentice-Hall, New Jersey. $15.95.

THE UCSD system is widely known and used on over a dozen computer architectures. If offers a number of languages including a version of Pascal and Ansi-77 Fortran (subset standard) embedded in a fairly sophisticated operating system. Considering its importance for microcomputer users it is surprising that there is not more introductory documentation available.

The early versions of the UCSD manuals were not well written and were difficult to follow. For those who suffered earlier this book is a welcome improvement.

The first part of the text deals with Pascal as implemented on the UCSD system. This has a number of useful extensions over the language described by Jensen and Wirth. The version of the UCSD system itself which is discussed throughout is version IV but some reference is made to earlier releases. The book provides a reference guide to Pascal in this specific implementation.

It is far from being an introduction for the novice as the language is not presented in a tutorial fashion. It appears to be aimed at the fairly experienced programmer in another language converting to Pascal or the user of a different implementation of the language converting to the UCSD system.

The second part of the book is devoted to a large number of programming examples. These range from the fairly elementary to the sort of "dirty tricks" necessary for system programmers to circumvent the strong typing of Pascal or do bit manipulations.

The book is well-suited to its intended audience which seems to be experienced programmers with serious applications or systems programming projects in mind. It cannot substitute for the detailed technical documentation but provides useful material to start from.

John Cookson

'Idiot' guide to programming

Computer Programming for the Complete Idiot. Donald McGunn. Columbus Books. £4.95.

ESSENTIALLY a step-by-step guide to programming in Basic, this book is intended to be used by someone seated in front of a Radio Shack (Tandy) TRS-80 microcomputer. Without a computer to provide an active response to the exercises, the text would make tedious reading.

Elementary operating and programming are covered in the first half of the book. Explanations of how the computer works and its limitations are excellent, and each point is amply illustrated.

The second half deals with application programming, and the author coaxes the beginner through the development of a payroll program.

I recommend this book for anyone who has bought/borrowed a TRS-80 and wishes to learn to program by practical experience, but it might confuse those learning on other machines.

Maggie McLening

Introduction to evaluation

Computer Performance Evaluation – Tools and Techniques for Effective Analysis. Michael F. Morris and Paul F. Roth. Van Nostrand Reinhold Data Processing Series.

FOR a number of reasons computer performance evaluation is probably one of the most useful areas of applied computer science. Its aim is to measure accurately, document and report the way computer systems perform under various loading conditions. To do this effectively, many different techniques are needed.

This book covers most of the important ones since it has sections devoted to the analysis of accounting statistics, benchmarking, simulation, hardware/software monitors and modelling.

The text is aimed at computer management who are likely to feel uneasy when dealing with advanced mathematical symbolism.

It would make a useful introduction for those looking for a newcomer's way in to computer performance evaluation, but would be of less value to those who have some experience of this field.

Philip Barker

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PROGRAMME

0845 Registration of delegates
0915 Opening remarks
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0930 Chairman's remarks
George Gilhespy, General Manager, Corporate Finance Division, Midland Bank plc
0945 The Investment Fund Approach
Gordon D Dean, Managing Director, Electra Risk Capital PLC.
1015 Getting the Best Out of a Clearing Bank
Colin Amies, Corporate Finance Director of Midland Bank plc
1045 Coffee
1115 Developing and Financing Technological Innovation
Geoff Taylor, Director and General Manager, Technical Development Capital Ltd.
1145 Two successful case studies
Michael Spencer, Managing Director, Dettest Ltd
Jim Philip, Managing Director, Xionics Ltd
1230 Cocktails and lunch
1400 The role of the British Technology Group
Minoo Randeria, Head of Information Technology and Electronics Group, British Technology Group.
1430 How the Stock Exchange can help
Peter Minion, Electronics Consultant, Laing & Cruickshank
1500 Department of Industry assistance and the MAP scheme
John Major, Electronic Applications Division, Department of Industry
1530 Tea
1600 Two successful case studies
Duncan Fitzwilliam, Chairman, CASE Ltd, and Tony Eggl, Managing Director, Quest Automation Ltd.
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1730 Summary and close George Gilhespy
1745 Cocktail reception
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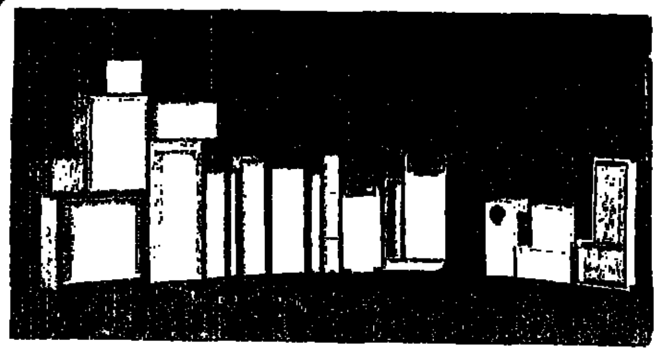

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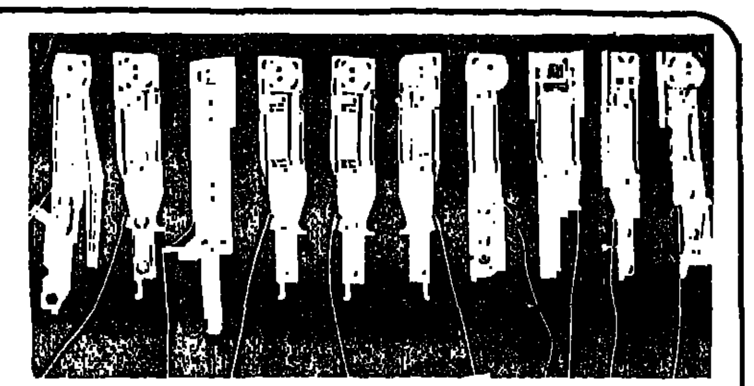

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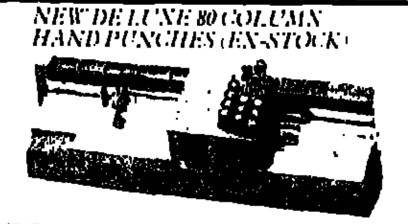

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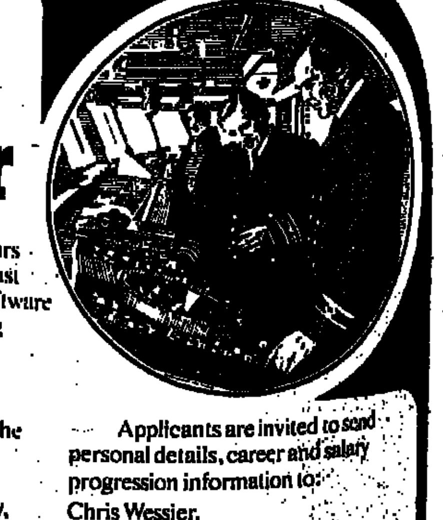

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Altergo Business Systems Limited has vacancies for Analyst/Programmers and MAAPICS Consultants to work on its expanding IBM System/23/34/38 business throughout the Midlands and North of England.

These are long term career positions which offer responsibility, good financial rewards and the opportunity to enhance your skills and experience. Applications cover the entire spectrum of financial, commercial, industrial and manufacturing activity.

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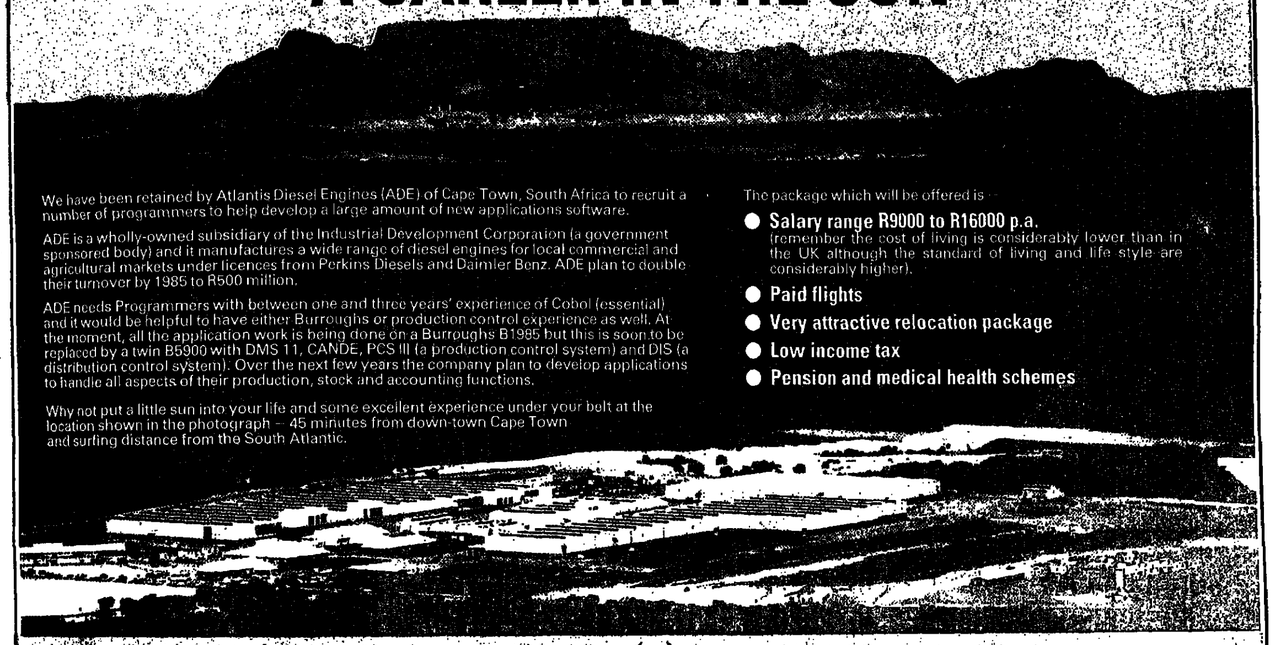

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April 15th, 1982

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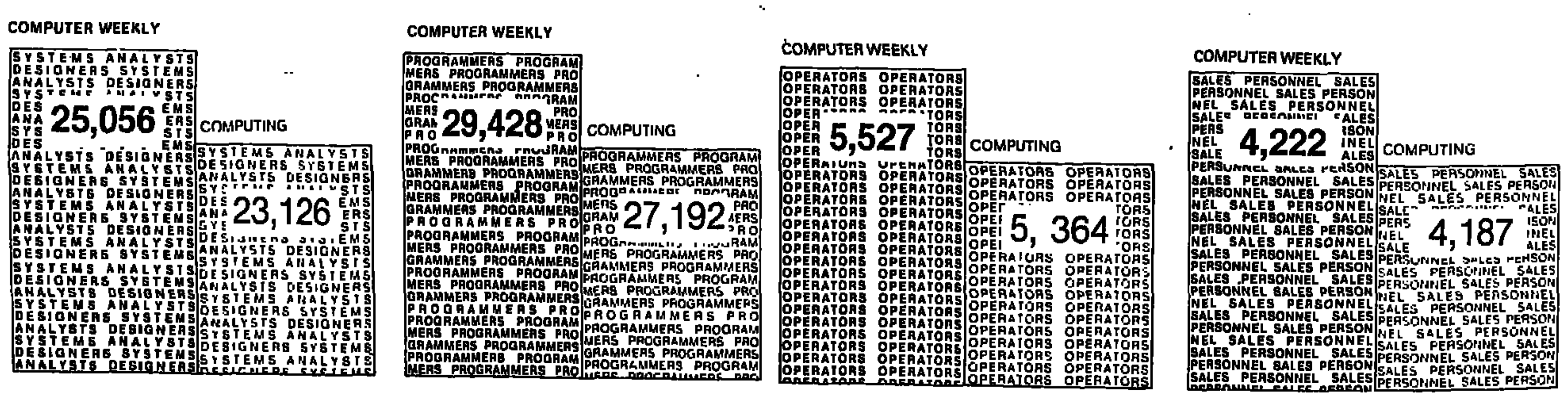

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Davy

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c£18k + Car **London**

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Mr Roger White, Systems Manager, James Walker Goldsmith & Silversmith plc, Century House, 245 Streatham High Road, London, SW16 6ER.

(8963)

Computer Manager

required by

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(8966)

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DIRECT LINE

01-661 0121

UNIVERSITY OF LONDON GOLDSMITHS' COLLEGE

Computer Manager

Applications are invited for the post of Computer Manager to be generally responsible for the College computer service, based on a DEC VAX 11/780.

Applicants should hold a degree or equivalent and have experience of management in computing service, preferably in higher education. Ability to deal with a wide range of users and to supervise the work of programming and operating staff will be required. Salary within the range £11,148 x 4 increments to £12,543 per annum inclusive.

Further details and application forms should be obtained from the Personnel Office, University of London Goldsmiths' College, New Cross, London SE14 6NW, not later than Thursday, 8th April, 1982.

(8962)

FIELD ENGINEERS
LONDON, HOME COUNTIES, LEEDS, CARDIFF
Start £9K + Car

Our client already THE fastest growing Micro Systems manufacturer in this country is planning further expansion (800%). Two new major products are soon to be introduced to compliment an already impressive range.

New opportunities now exist for bright young engineers seeking full System involvement (H/W + S/W) in a highly professional and friendly company.

Living in London, Home Counties, Leeds or Cardiff with Mini/Micro experience, then . . .

Call Keith Wallis NOW to discuss this unique opportunity on

ALLTRONICS PEOPLE (AGY)
01-543 4814 ADV

AT LEAST 1 YEAR'S EXPERIENCE? THEN MOVE INTO CONSULTANCY

C. LONDON **UP TO £7,500**

A prestigious consultancy with clients in many different sectors of industry now seeks to recruit three programmers with experience of one of the following languages:

BASIC, RPGII, DATABUS, PL/1, COBOL

The position would involve considerable client contact and provide the opportunity to work on a wide range of hardware and applications. The company are particularly well known for their excellent training and the successful candidate will benefit from good career progression.

For more details, please telephone or write to Andrew Cousins quoting ref: 6048.

(9049)

Lloyd Chapman Associates
123, New Bond Street, London W1Y 0HR 01-499 7761

Computing in Staffordshire

Senior Planning Officer (Computing)

Grade S01/2 £8190-£9528

Experienced Computer Programmers with systems analysis skills seeking a more challenging career in a growing environment are invited to apply for this senior post in the Research and Intelligence Unit of the County Planning Department. The appointee should be able to handle the computer programming needed to monitor strategic planning policies and will be required to maintain and develop existing programs, write and implement new programs and assist in the use of a wide range of software packages. This will require a relevant qualification with operational knowledge of Fortran, PL1 and Assembler, and experience in data and scientific processing. A growing number of computer applications are becoming operational using remote VDU terminals in the Department interactively with a County IBM 4341 operating under VM.

Applications (quoting post no: 3002088) giving full particulars of age, experience, qualifications etc., together with the names and addresses of two referees should reach the County Planning Officer, Martin Street, Stafford ST16 2LE by 6th April, 1982.

Relationship to any Member or Senior Officer of the County Council must be disclosed.

All applicants are asked to note that it is the County Council's view that it is desirable for their employees to be members of an appropriate Trade Union.

Staffordshire County Council

(9003)

UNIVERSITY OF LONDON GOLDSMITHS' COLLEGE

Applications are invited for the following new posts in connection with the installation of a DEC VAX 11/780 computer to provide computing facilities throughout the College:

1) **Systems Programmer.**
2) **Applications/Advisory Programmer.**

Post 1. This post will be concerned primarily with the systems maintenance and support of the equipment and applicants should have substantial experience of the VAX system. Salary within the range £9,981 x 6 increments to £10,824 per annum inclusive.

Post 2. Applicants should have experience of programming in BASIC, FORTRAN and PASCAL and of advising users. They will be expected to provide programming support to members of staff and to assist users to find appropriate solutions to their computing requirements. Salary within the range £7,125 x 6 increments to £8,091 per annum inclusive.

Further details and application forms should be obtained from the Personnel Officer, University of London Goldsmiths' College, New Cross, London SE14 6NW, stating clearly which post you are interested in, not later than Thursday, 8th April, 1982.

(9051)

W.P. SALES

Quota £19,000

International manufacturer of office systems are seeking a further sales executive for London. Good track record of sales together with some related experience and ideally aged 25-40. For further information call Pamela Hills on 01-828 2681.

DRAKE PERSONNEL CONSULTANTS

(9132)

Information Technology Centre Manager

required for Grand Metropolitan Community Services Limited to organise and run an Information Technology Centre, with the aim of giving young people a year's educational experience in the future uses of technology.

The Manager will be responsible for setting up and opening the Centre, and ensuring that a training programme is designed and operated to meet the needs of the trainees, and actively participate in the day-to-day teaching and management of the ITeC.

Experience in the educational field and micro-computer field is necessary, and salary is Circa £12,500 per annum.

Initial contract for one year.

Applications in writing, giving details of previous experience and a telephone number, should be made to T. R. E. Mann, Grand Metropolitan Community Services Limited, 1 Gloucester Mansions, Gloucester Place, Brighton, Sussex BN1 4BT.

(9116)

BOX NUMBERS

Box number replies should be addressed to:

Box Number.....

c/o Computer Weekly
Quadrant House
The Quadrant
Sutton, Surrey SM2 5AS

Nationwide Sales Execs
(hardware & services)
SA's & Progs
NW + Yorks
061-832 4184 - 24 Hours
(Transfer charges, if necessary)
Sampson Staff
COMPUTING & ACCOUNTANCY RECRUITMENT
(9108)

Inner London Education Authority
HAMMERSMITH AND WEST LONDON COLLEGE
Gliddon Road, Barons Court
London W14 9BL

SENIOR LECTURER IN COMPUTER STUDIES

Senior Lecturer required for September to teach computer studies, programming and business related subjects. Duties would include some responsibility for the day-to-day operation of the Computer Laboratories and related support services.

The successful candidate will teach computer studies and appreciation across the College as a whole and at all BEC levels, including data processing and computer technology at BEC Higher level. Experience of team teaching and in-service training are desirable qualifications.

Salary Scale Senior Lecturer: £9824-£11328 (plus £769 Inner London Allowance) subject to formal approval.

Application forms and further particulars from Senior Administrative Officer (IKC) to be returned within two weeks from the date of advertisement.

(9124)

enator

TOP SALES EXECUTIVE TO GROW WITH ENATOR

Can you communicate the business idea of one of Europe's most successful management and data processing consultancies and achieve a sale?

Enator (U.K.) Limited requires an experienced sales executive to assist in our expansion on the British market.

The right person can look forward to a rewarding position, not only measured in economic terms, with a very good salary, but also in the field of personal development.

The job demands that you have:

- good experience with a proven record selling hardware and/or software.
- thorough experience of project management within the data processing area.
- the ability to listen to clients and analyse their needs.
- drive and ability to take own initiative.
- the willingness to travel all over Britain, as well as abroad as the activities expand.
- experience within one or more of Enator's main client sectors.

Enator's organisation is very different from those environments you have been used to. We place emphasis on personal development — each person has the possibility to influence their own work and take on responsibility. As most of us work with clients in small groups, we stress the importance of personal meetings and leisure activities in order to increase personal skills and enhance the Enator spirit.

If you find this post interesting, please send your application, including CV and expected salary to:-
Enator (U.K.) Limited, Ibex House, 61-65 Baker Street, Weybridge, Surrey. Tel: 0932 46192.

enator

Enator (U.K.) Limited is the British subsidiary of the international Enator Group of Companies. The Group, with headquarters in Stockholm, Sweden, number altogether 160 consultants and had a turnover of £6 million last year. The companies' products cover the whole range from management consulting through system development and implementation, via micro-cyclesser systems, to staffing of data processing projects. We are totally independent of any hardware manufacturer. Our records cover many well-known clients and we have earned a reputation for our working standards — taking full responsibility for meeting cost and time budgets. These clients cover a very broad range of activities and our companies have specialised experience in Retail and Distribution, Banking, Finance, Manufacturing and Travel and Tourism.

Other companies in the Enator Group:

Enatorgruppen — provides the combined expertise of management and data processing consultancy.

Mikrotell — covers the wide field of micro and mini-computer systems.

Dynator — provides a unique service of maintenance and emergency back-up for systems, operating system and operations.

Enator Syd — Enator's local company in South-Sweden.

Enator Deutschland GmbH. — Enator's subsidiary in Germany.

SALES BIT
Quality of management—4

Spare a thought for salesmen out in the sticks

IT IS essential for salespeople wishing to advance their careers into management to spend at least some time in territory sales operating from head office.

It is a fact of life rather than a proven statistic that companies tend to promote faces they know rather than names on a sales performance league-table. It probably makes the hierarchy feel more secure.

If one accepts this proposition, then it is equally reasonable to suggest that, as a direct consequence, most sales managers are likely never to have worked in the provinces, or more particularly have never worked from home rather than from a local base.

Such managers are unlikely to appreciate fully the special difficulties that reside in this isolated environment. Providing complete client satisfaction without resident engineers, analysts, systems programmers, etc, is extremely difficult.

Sustaining personal enthusiasm when sales success is hard to find become a considerable pressure when there is no one around with whom to discuss and commiserate. There is nothing quite like "the loneliness of the long-distance salesman".

In the recruitment business I see the voluntary departure of apparently successful salespeople from good companies occur time and again. In many cases in-depth interviewing subsequently reveals that their dissatisfaction is almost entirely due to working in isolation. In many cases I have seen highly accomplished salesmen from the haven of head office curl up into a foetal position after a brief exposure to "sheep country."

Clearly there is a requirement for regular management visits to sales personnel who operate from remote locations.

The real need is for management commitment in the form of local witness – hands-on experience of the salesman's parochial problems. This can only be achieved on territory.

It is not as if field sales involvement is to the benefit of the salesman alone. A day on territory with the local representative can be very revealing. The state of a salesman's records, his relationship with his clients, the state of his company car, etc, can produce much more meaningful information about the quality of performance than any cosy chat back at base (particularly if it is arranged at short notice – like the evening before!)

In many cases the complaint of the remotely located salesperson is not so much a lack of management visits, but more the absence of any kind of communication other than the occasional chastisement or demand for information.

Salespeople are typically an emotional breed with a need to feel wanted – a need that is exaggerated by isolation. Regular communication between the sales manager and his individual salespeople, preferably in the form of praise or assistance, is therefore essential.

The telephone is a convenient device, but it lacks the credibility and authority of a letter. There is nothing quite so motivating as a "Well done" letter . . . "Just a note of congratulations on achieving annual sales target with two months yet to go. It must have involved a lot of hard work. Best wishes for more success in the future."

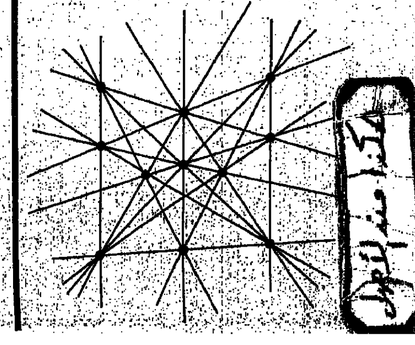
This is absolute confirmation that the salesman's contribution is appreciated and officially recognised. It is not merely an implied word of praise, or even a token of gratitude from his manager; it is rather the company saying thanks through official channels in black and white.

It can be shown to friends, family or even prospective employers should the need ever arise.

It is worth bearing in mind that appointing a new recruit and immediately relocating him or her to an isolated territory virtually has an in-built guarantee for disaster.

So, spare a thought for the salespeople in those remote areas beyond Potters Bar. Just like you they not only need to feel wanted, but also want to be told. After all, the chances are they represent some 40% of your turnover.

Surely that's worth a letter in itself.

Alan Williams

PUZZLE ANSWER